

ANIMAL KEEPERS' FORUM

The Journal of the
American Association of Zoo Keepers, Inc.

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March 2012

ANIMAL KEEPERS' FORUM, 3601 S.W. 29th St., Suite 133, Topeka, KS 66614-2054

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or at www.aazk.org

Table of Contents

About the Cover/Information for Contributors.....	98
From the President.....	99
The Scoop	100-103
Chapter News.....	104-107
Coming Events.....	108-109
AAZK Announces New Members.....	110
Call for Papers For Dedicated Issue of AKF – Chelonians & Diabetic Animals	112
General Announcements	113
<i>What's Black and White and Red All Over?</i>	114-118
<i>The Myth of Domestic Monkeys: Common Law and Nonhuman Primates</i>	119-130
An Interview with Marissa Krouse: Chairperson of Acres for the Atmosphere	131-134
Research in Practice.....	135-138
Training Tales: <i>Ideas to Help New Training Programs</i>	139-141
Conservation/Legislation	140-146
In Remembrance: Dianna Frisch	147-148



MISSION STATEMENT

(Revised April 2009)

American Association of Zoo Keepers, Inc.

The American Association of Zoo Keepers, Inc. exists to advance excellence in the animal keeping profession, foster effective communication beneficial to animal care, support deserving conservation projects, and promote the preservation of our natural resources and animal life.

About the Cover - This month's cover features one of two red panda (*Ailurus fulgens fulgens*) cubs spotted in December 2011 by Red Panda Network Eco Tour participants in eastern Nepal. The group named the female cub "Suntali," which roughly translated, means "Beautifully Orange."



**RED PANDA
NETWORK**

Red Panda Network conducts Eco Trips in eastern Nepal to raise awareness for the red panda and its habitat, which is deteriorating due to external pressure resulting from human activities, including road-building, illegal timber harvest, over-grazing, and slash and burn agriculture. The Red Panda is currently listed as "Vulnerable" on the IUCN Red List and Red Panda Network is working hard to educate and empower the local community and rural populations in eastern Nepal to adopt and promote sustainable living practices. Red Panda Network is a Conservation Partner of AAZK Inc.

Photo taken by Rajiv Paudel, Red Panda Network.

Please Note New Monthly Deadline and Contact Information

Articles sent to *Animal Keepers' Forum* will be reviewed by the editorial staff for publication. Articles of a research or technical nature will be submitted to one or more of the zoo professionals who serve as referees for *AKF*. No commitment is made to the author, but an effort will be made to publish articles as soon as possible. Lengthy articles may be separated into monthly installments at the discretion of the Editor. The Editor reserves the right to edit material without consultation unless approval is requested in writing by the author. Materials submitted will not be returned unless accompanied by a stamped, self-addressed, appropriately-sized envelope. Telephone, fax or e-mail contributions of late-breaking news or last-minute insertions are accepted as space allows. **Phone (330) 483-1104; FAX (330) 483-1444; e-mail is shane.good@aazk.org**. If you have questions about submission guidelines, please contact the Editor. Submission guidelines are also found at: aazk.org/akf-submission-guidelines/.

Deadline for each regular issue is the 3rd of the preceding month.

Dedicated issues may have separate deadline dates and will be noted by the Editor.

Articles printed do not necessarily reflect the opinions of the *AKF* staff or the American Association of Zoo Keepers, Inc. Publication does not indicate endorsement by the Association.

Items in this publication may be reprinted providing credit to this publication is given and a copy of the reprinted material is forwarded to the Editor. If an article is shown to be separately copyrighted by the author(s), then permission must be sought from the author(s). Reprints of material appearing in this journal may be ordered from the Editor. Regular back issues are available for \$4.00 each. Special issues may cost more.

E-Mail Addresses:

You may reach Barbara Manspeaker at the AAZK Administrative Offices at: aazkoffice@zk.kscoxmail.com.

You may reach Shane Good and *Animal Keepers' Forum* at: shane.good@aazk.org.

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AAZK website Address: aazk.org

BFR Website: aazkbfr.org

From the President

While the Message from the President is normally directed towards the membership in general, this month, I am writing to our Chapter leadership. Chapters are the backbone of this Association and you all do a great many things which define who we are and why we are here. In the end, as we reach out to leadership, the effects on the membership will be evident.

During our strategic planning sessions in San Diego just prior to the 2011 AAZK Conference, the Board of Directors and select staff and committee chairs were tasked with evaluating the current direction of the Association, defining both vision and mission of the organization. In essence, we created a formula for success and a checklist for commitment. We paved a path for how we might serve the Association as better leaders and effective communicators.

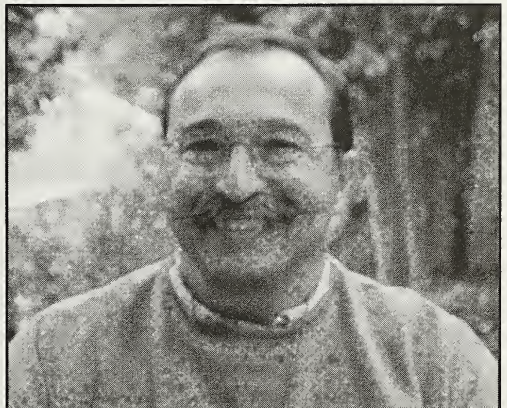
Communication comes in many forms and many styles. As a professional organization, we have excelled at directing communication to you in the form of the *Animal Keepers' Forum*, our e-blasts (electronic news flashes), and annually through our conferences. On our website, our front page provides updated conference and workshop information and in our Members Area, we offer everything from past conference proceedings to manuals and even the discussion boards.

Where am I going with all of this? While we direct a great deal of communication to the membership, we rarely have the opportunity to engage and sustain conversations with you. That is going to change. If you were at the San Diego AAZK Conference in 2011, you saw how effective Ed Hansen's Town Hall Meeting was. Ed engaged the members present, fielding questions and dialoguing about the operations of AAZK. Overall, it was a very successful meeting.

I am taking Ed's cue and engaging each and every one of our Chapter Presidents. I have initiated e-mails to Presidents requesting phone time in order to spend some one-on-one time with the individual leaders. In addition, each of the Chapter Presidents has been sent a brief survey made up of membership and leadership questions. My goal is to reaffirm the relationship between National AAZK and our Chapters and to recognize our Chapter Presidents as major donors, who donate their time to keep Chapters motivated and successful.

To further the engagement process, each of the Presidents receives an electronic newsletter designed for Chapter leaders. The newsletter contains timely information for Chapters, leadership information, and news from National. It's our effort to keep you informed on a timely basis.

Lastly, I have set up a listserv for Chapter Presidents. This is the arena where you, as leaders can network with other Chapter leaders, pose questions to National, exchange ideas and continue with our mission of fostering effective communication. If you are a Chapter President and have not received any correspondence from me, please contact me at bob.cisneros@aazk.org. It is our goal to make you and your Chapters successful.



Bob Cisneros

Zoo Macropod Interest Group now on Facebook®!

Other than your in-zoo colleagues, it is quite possible that you are the only macropod keeper for miles. When you have a question or idea you'd like to try you may turn to a listserv or your e-mail address book to find other macropod keepers. The annual AAZK conference is also a great place to connect with keepers from other institutions face to face. After a "mob" of kangaroo keepers connected at the recent San Diego AAZK poster session, we decided to keep in touch via a "Zoo Macropod Interest Group" on Facebook®. We'd like to invite other keepers to join in on the fun.

The Zoo Macropod Interest Group is an open forum for zoo keepers to post questions and share advances in the care of kangaroos, wallabies, tree kangaroos, pademelons and other macropods. Members must work in the zoo field and provide their zoo's contact information to join. Keepers of other creatures are also more than welcome. We've already shared pictures and tips on crates, scales, and training and look forward to having some new members and their feedback. Look us up on Facebook® or e-mail zoomacropods@groups.facebook.com if you want to send a message to everyone in the group, but not necessarily become a member. If you have additional questions, please contact lenhart.wendy@phillyzoo.org.



Photo by Lynn Tunmer, Philadelphia Zoo

Calling All Members – The AAZK Membership Drive

Many of you may have been contacted by now from a representative of the Membership Resources Committee (MRC) seeking your assistance to participate in a membership drive for the Association. Many organizations rely on their members and AAZK is no exception. The benefits of doing a membership drive include (but are not limited to):

- Less likely for membership dues to go up in all categories
- It helps to grow the Association
- AAZK gives Keepers a venue to develop on a professional level
- Provides recognition of the institution participating in the drive

You as an individual or your Chapter can participate in the drive through various means. Brochures have been created that deliver a synopsis of the Association. Hand out the brochures to animal department personnel, new hires, docents, volunteers or anyone interested in AAZK. The MRC has also developed a scripted power point presentation to compliment the brochure if you would like to deliver a more personal message to prospective members. Talk to your Director and encourage the purchase of an Institutional Membership; benefits include discounted rates on job postings. Want to become involved on a more active level, form a Chapter or get directly involved with the Association by joining a national committee such as the MRC? If you would like more information on how to get involved with the membership drive contact Jacque Blessington (MRC Project Manager) at: Jacque.Blessington@aazk.org.

Bowling for Rhinos Conservation Resource Fund Grant

The American Association of Zoo Keepers, Inc. (AAZK) is pleased to announce the Call for Proposals for the Bowling for Rhinos Conservation Resource Fund. This competitive grant is designed to fund projects focused on rhino conservation and research. The total amount of funds available in 2012 is \$2,300.29. Successful proposals will reflect AAZK values and meet award criteria in one of four categories:



- **Category 1 - In-situ Rhino Conservation and Research**

Short-term (less than one year), specific, field research projects on African or Asian rhino species conducted by an individual or organized group of individuals working under the auspices of a zoological facility, educational entity or AAZK Conservation Partner.

- **Category 2 - In-situ Community, Educational or Medical Programs (Africa or Asia)**

Community education, school support or medical programs developed or administrated by an individual working under the auspices of a zoological facility, educational entity or AAZK Conservation Partner restricted to the continents of Africa or Asia. Preference may be given to local programs established and/or administrated by LWC (Lewa Wildlife Conservancy), IRF (International Rhino Foundation) or ACK (Action for Cheetahs in Kenya) endorsed partners.

- **Category 3 - In-situ Species Conservation**

Short-term (less than one year), specific, field research projects on any species that shares the exact same ecosystem as: Asian, Java, Sumatran, and African black or white rhino.

- **Category 4 - Ex-situ Rhino Conservation and Research**

Short-term (less than one year), specific, zoological research projects on African or Asian rhino species conducted by an individual or organized group of individuals working under the auspices of a zoological facility, educational entity or AAZK Conservation Partner. Researcher(s) must be able to demonstrate evidence of partnership with a rhino conservation entity operating in Asia or Africa combined with a tangible benefit to an in-situ conservation project.

Eligibility

Affiliation or partnership with AAZK is not required, but preference may be given to AAZK Members or Conservation Partners.

Applications are due no later than June 1st. Award announcements will be made on July 1.

Please visit aazk.org or contact Amanda Kamradt, Conservation Committee Chair at amanda.kamradt@aazk.org for application or more information.

Grants for Leadership Development and Advances in Aviculture AAZK Travel Grant



Avian Scientific Advisory Group

Guidelines and application process

Purpose: The Avian Scientific Advisory Group (ASAG) believes that recruiting and building capacity in the next generation of zoo bird managers is vital to the continuity and survival of zoo avian programs. To this end, ASAG offers small grants to bird keepers and working bird husbandry supervisors. This grant supports travel to the annual National AAZK conference for the purpose of presenting a paper on advancements in the care, welfare, or reproduction of avian species in zoos and/or field conservation projects in which the applicant has been involved in a lead role. It is envisioned that grant recipients will become more familiar with ASAG purposes and goals, begin to establish a network of colleagues and mentors, and become active participating members of AZA avian programs.

Criteria for Funding: Grant applicants must be a paid employee of an AZA-accredited institution, a member of either AZA or AAZK [National or local Chapter], and have worked in a position that involves the care and management of captive birds for at least two years. Persons holding the title Curator or Assistant Curator (or their equivalent) are not eligible. Applicants will make a presentation on either original research or a case study relevant to zoo aviculture or programs at the annual AAZK conference. All work must be original and not have been presented or published elsewhere. Preferred topics are those which involve taxa of current or future priority in the appropriate TAG regional collection plans; taxa for which innovation in breeding or captive management are needed; taxa of conservation priority in the wild; significant advancements in the welfare of captive zoo birds; and significant avian conservation programs. Applicants will also be judged on their leadership potential, initiative, and problem solving skills as recommended by their direct supervisor and resume.

Proposal Submission Deadline: 15 April of the grant cycle year

Process for Application and Review:

Applicants should submit:

- 1) application form
- 2) supervisor's letter of recommendation,
- 3) letter of institutional support,
- 4) resume,
- 5) title and abstract of the presentation.

The abstract must be between 100 and 250 words and indicate the outcome of the study. The application will include current job title, a summary of personal avicultural experience, rationale for how the presentation will advance zoo aviculture and the applicant's professional career, and a travel budget. The letter of recommendation must come from the applicant's direct supervisor or manager. A letter of support must be signed by the institution's director and verify the zoo will provide the support necessary to ensure the applicant can attend the AAZK conference if the applicant is awarded a grant. Abstracts will be reviewed based on the criteria stated above. All materials must be submitted electronically as either a WORD document or as a pdf file. Applicants will be notified of the final award by 30 June of the grant cycle year.

Expectations of Grant Recipients: Grant recipients are expected to travel to the next scheduled National AAZK conference for their presentation. The presentation must be in a Power Point format and a copy of the presentation must be submitted for posting on the ASAG website. Copies of expense receipts specifically related to transportation to and from the AAZK conference and for housing and meals while attending the workshop are to be provided to the ASAG Grants Program Chair within 30 days of the end of the conference.

Grant Funds Management: Maximum grant awards will be \$750 but may be less based on actual travel costs. Grant funds will pay the AAZK registration fees for the entire conference, three days lodging at one-half the conference hotel rate (recipients are expected to share a room or cover the additional cost of a single room), transportation, and meals which are not included with registration. Only those expenses in line with ASAG travel guidelines will be reimbursed; specific guidelines will be included at the time of the grant award. If a cash advance is needed, such checks will be made payable to the applicant's institution. Brookfield Zoo is unable to provide cash advances without a detailed invoice provided at the time of the request – the invoice must come from the zoo (not the individual and be invoiced to ASAG. The institutional director will be responsible for reimbursing any expenses for which receipts are not provided or are not permitted by the guidelines. Expenses cannot exceed \$750. Checks for reimbursement (not advances) will be made directly to the party that incurred the expenses.

Send requests for Application, Proposals or address Grant Process questions to:

Diane Olsen
ASAG/AAZK Liaison
Assistant Curator/Behavioral Management Coordinator
Moody Gardens
dolsen@moodygardens.com



Amanda Ista Appointed as AAZK's Liaison to the AZA Animal Welfare Committee

Amanda Ista of the Milwaukee County Zoo was recently appointed as AAZK's Liaison to the AZA Animal Welfare Committee, taking over the position vacated by Dawn Neptune of Utah's Hogle Zoo. Amanda is currently a member of the AAZK Conservation Committee and is a recent graduate of the 2011 AAZK/PBI Leadership Camp. Congratulations Amanda!

CHAPTER NEWS

Becoming the GREATER Philadelphia Chapter of AAZK

Fresh from hosting the 2010 National AAZK Conference, the GPCAAZK wanted a fresh start after years of planning our big event. As many of you know, hosting the National Conference is an intense, yet rewarding experience that can potentially burn out your membership. With this in mind, we spent the months after hosting setting gear for a new approach for 2011 that would make the "G" in our acronym truly stand for "greater." In the time since our change, Philadelphia Zoo keepers have welcomed animal care professionals from the Elmwood Park Zoo, Brandywine Zoo, the Academy of Natural Sciences, the Lehigh Valley Zoo, and the Camden Adventure Aquarium to our meetings. Our goal was and continues to be to enrich our existing members and involve new institutions to be the best darn zookeepers that we can be!



A M E R I C A N
A S S O C I A T I O N
O F Z O O K E E P E R S
GREATER PHILADELPHIA CHAPTER

We made three basic changes to the way we operate, changes that did involve a vote to change some of our local by-laws.

1. Meeting locations and times

Lunch meetings that were previously only held at the Philadelphia Zoo are now held in the evenings after work. Last year we had two of those meetings at the Elmwood Park Zoo in Norristown, approximately 15 miles away from the Philadelphia Zoo. All of our meetings are scheduled for the year in advance so that keepers can plan ahead to stay late or travel to a partner institution for our monthly meeting.

2. Leadership Structure

Committee meetings posed a challenge for planning after-hours in addition to general membership meetings, so in 2011 we rotated the committee focus at each monthly meeting. For 2012, we have modified this further by dissolving all committees and having a point person for our signature projects such as Bowling for Rhinos, our book sale, and conservation education projects. With this method, we hope that small assignments offered to a larger group of people will help get more people involved and take pressure off of individual people. Additionally, we added a position on our executive board for a fundraising chair and a liaison for the Elmwood Park Zoo

3. Attendance Incentives

We typically provide food for our evening meetings, some budgeted and some as planned potlucks. When we order food, we occasionally forgo the standard pizza and go with sandwiches every once and a while. Variety is the spice of life! Our enrichment coordinators periodically have animal toy donations or yard sale discoveries to share with the membership, so on these lucky occasions they are given out as door prizes.

Our new meeting format has just started its second year and we expect some further tweaking to make it work. We are excited about all of our new faces and are looking forward to our future growth.

Wendy Lenhart, GPCAAZK Liaison

Chapter Website: philadelphiaazk.org

Check out the Greater Philadelphia Chapter of AAZK Facebook® page too!

AAZK, Inc. Welcomes Two New Chapters to the Association

The Redwood Coast AAZK Chapter

Sequoia Park Zoo
3414 W St.
Eureka, CA 95503
President-Janee Thill
Vice President-Kelsey Kuhn
Secretary-Megan Stobb
Treasurer-Kathleen Juliano
Chapter Liaison-Amanda Auston
e-mail: redwoodaazk@gmail.com

Acadiana AAZK Chapter

Zoo of Acadiana
116 Lakeview Dr.
Broussard, LA 70518
President-Melissa Passman
Vice President-Brittney Dyess
Secretary-Jen Wilson
Treasurer-Fran Daigle
Chapter Liaison-Lindsay Ezell

Advances in Animal Keeping: This one's a keeper!

April 28-May 3, 2012
Toledo Zoo, Toledo, OH

Download the Course Registration Form at aza.org/AAK.aspx.

Course Description

Advances in Animal Keeping covers the essentials of animal keeping across all taxa. The course focuses on the very highest standards in animal husbandry, in combination with problem solving, team building and interpersonal skills.

You will engage with professional colleagues and apply what you learn back at your home institution. The goal of this course is to motivate and retain animal care professionals within our industry and to elevate the standards of animal care in AZA zoos and aquariums.

In-class discussion, exchange of ideas with animal care colleagues, small group activities, and question-and-answer sessions all enable students to analyze trends, to think critically, to evaluate problems and propose solutions, and to communicate effectively with other members of their organization.

Advances in Animal Keeping is a cooperative effort between the Association of Zoos and Aquariums and the American Association of Zoo Keepers (AAZK).

Tuition & Expenses

\$920 for AZA Individual Members & AAZK Members
\$1,020 for non-members
(\$50 late fee after February 25, 2012)



**ASSOCIATION
OF ZOOS &
AQUARIUMS**

A Perfect Day For Tree Planting

By Hali O'Connor, Sr. Mammal Keeper, SD AAZK Board Member

Overcast skies, light rain, and cool temperatures were forecasted for 21 January 2012...exactly the right conditions for the much anticipated Acres for the Atmosphere tree planting event. Over 60 people signed up...and SHOWED UP, prepared to dig some holes, get a little muddy and help young native cottonwood trees, arroyo willow trees and a few mule fat shrubs get settled in their new home along the San Diego River in the Mission Valley Preserve.

To recap, the San Diego Chapter of AAZK raised over \$2200 while hosting the 2011 National AAZK conference last August. The Acres for the Atmosphere project goal was to encourage delegates to donate money to help offset the carbon produced by travel to and from the conference. With this money, SD AAZK joined forces with The San Diego River Park Foundation to plant trees in two choice locations along our precious San Diego River. The total was 319 trees to be exact!



The San Diego Chapter of AAZK celebrating a successful tree-planting event for Acres for the Atmosphere.

Anyone interested in helping with the planting project was encouraged to sign up on the SD AAZK website to partake in this fun and important event. Planting native tree species along the San Diego river that stretches from Julian to the ocean has many benefits. Native trees provide needed habitat and foods for many species, some of which are endangered. The native trees also provide erosion control, especially important in restoring wildfire burned areas. And the trees help to restore a natural balance and keep invasive species in check.

The 21 January 2012 planting included such an amazing group of enthusiastic and efficient tree planters that the 144 trees allotted to the Mission Valley Preserve were all lovingly planted in an hour! We even had time to clear away weeds from some of the existing trails to help encourage visitors to stay on a path instead of wandering off and disrupting the native plants and animals calling the

preserve their home. The San Diego River Park staff also treated us to a wonderful trek to the river's edge where we learned about some of the native and non-native plant species that live along our river.

The remaining 175 trees will be live oaks to be planted along the El Capitan Reservoir in Alpine on 4 February 2012. Anyone interested in helping with this project may sign up on our website at sdaazk.com. Several months ago a group of us went out to this area and collected acorns to produce the trees that will be planted in this area. That way we are sure to plant a species that belongs in the area and is very beneficial to the other species living there.

A big thank you to all those that participated in this wonderful community project! Be sure to check out the pictures from that day on our Facebook® page at facebook.com/sdaazk

ICZ and IRF Announce Opportunity to See Asian Rhinos: Earth's Most Threatened Land Mammals

International Congress on Zookeeping Pre and Post-Conference Tours to Visit Ujung Kulon, Bukit Barisan Selatan, and Way Kambas National Parks

- ICZ Pre-conference tour: 28 August – 8 September 2012
Led by Dr. Susie Ellis, International Rhino Foundation
- ICZ Post-conference tour: 14 September – 23 September 2012
Led by Kerry Crosbie, Asian Rhino Project
- Maximum 6 participants per trip
- Cost: US \$2,100 per person*

For Further Information, please contact Dr. Susie Ellis at s.ellis@rhinos.org

To see the full brochure, please visit the ICZ website at iczoo.org

*double occupancy – includes all activities, airfare from Singapore to Jakarta, Jakarta to Bandar Lampung, all in-country transportation, accommodations, park fees, meals and non-alcoholic beverages. Excludes alcoholic beverages, laundry, and other personal expenses. Single supplement is US \$400.



Coming Events

Post Your Upcoming Events here — e-mail shane.good@aazk.org

April 12-15, 2012, Dallas, TX

Otter Keeper Workshop

The 5th biennial workshop will be hosted by The Dallas World Aquarium. Any staff working with any of the freshwater species is welcome to attend. Topics will include: captive management issues, enrichment, training, water quality, health care, nutrition, diet, hand-raising, exhibit design, and lots of sharing of information between keepers. Registration is \$75. For more information, see otterkeeperworkshop.org.

April 27-30, 2012 and October 12-15, 2012

From Good Care to Great Welfare: A Workshop Designed for Animal Care Professionals

Presented by the Center for Zoo Animal Welfare, Detroit Zoological Society. A unique four-day workshop for animal care staff working with captive exotic animals. The workshop is designed to help participants better understand animals' perspectives and experiences, address the challenges captivity imposes on animal welfare, and develop the skills necessary to assess and improve overall well-being. Exercises and experiences are immersive and designed to help us understand captivity from the animals' point of view. Limited scholarship opportunities available.

For information contact: Elizabeth Arbaugh, Animal Welfare Manager, Detroit Zoological Society, Tel: 248-398-0903 x3643, E-mail: Elizabeth@dzs.org or visit czaw.org.

May 6-11, 2012

ABMA Annual Conference

Hosted by Oakland Zoo, California Academy of Sciences, and CuriOdyssey. The conference location will be the San Francisco Airport Marriott, Burlingame, CA. See the theabma.org for more info.

May 13-16, 2012

Shape of Enrichment Regional Workshop

Hosted by Howletts and Port Lympne Wild Animal Parks, Kent, UK. For more information go to enrichment.org.

August 8-14, 2012

The World Congress of Herpetology

To be held in Vancouver, Canada. For more information see worldcongressofherpetology.com.

August 16-19, 2012

The 10th Annual Symposium on the Conservation and Biology of Tortoises and Freshwater Turtles

Tucson, AZ. Hosted by the Turtle Survival Alliance and the IUCN Tortoise and Freshwater Turtle Specialist Group. For more information go to turtlesurvival.org.

September 9-13, 2012

4th International Congress on Zookeeping

Sponsored by Wildlife Reserves Singapore/ Singapore Tourism Bureau. Theme: "Many Voices, One Calling". For info on sponsorship or exhibit opportunities e-mail eo@aszk.org.au. Check the ICZ website iczoo.org for latest news/information.

September 23-27, 2012

AAZK National Conference

Hosted by the Rosamond Gifford Zoo and the Rosamond Gifford Zoo AAZK Chapter in Syracuse, NY. For more information see rgzaazk.org.

Upcoming AAZK National Conferences

2012 - Syracuse, NY - September 23-27

2013 - Asheville, NC - September 22-26

2014 - Orlando, FL - September 8-12

For information on upcoming AAZK conferences, watch the AAZK website at aazk.org

Upcoming AZA National Conferences

September 8-13, 2012

AZA 2012 Annual Conference

Hosted by Phoenix Zoo, Phoenix, AZ

September 7-12, 2013

AZA 2013 Annual Conference

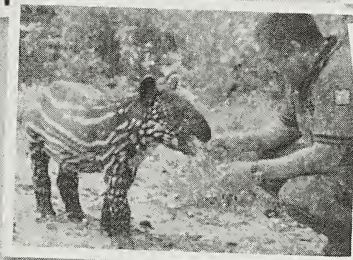
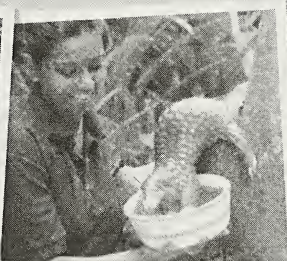
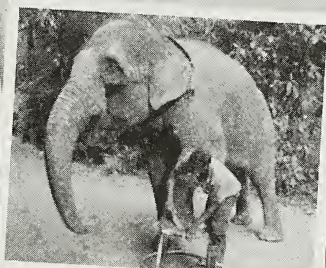
Hosted by the Kansas City Zoo, Kansas City, MO

For more information on AZA Conferences see aza.org/ConfWork/AC_Intro/index.html.

4th International Congress on Zookeeping

9-13 September 2012, Singapore

Many Voices, One Calling



Themed "MANY VOICES, ONE CALLING", this conference hopes to bring together delegates from around the world for the objectives of enhancing the professionalism of zookeepers and the welfare of their animals. We encourage keepers to share their knowledge and experiences with fellow keepers at this momentous event.

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AAZK Announces New Members

New Institutional Member

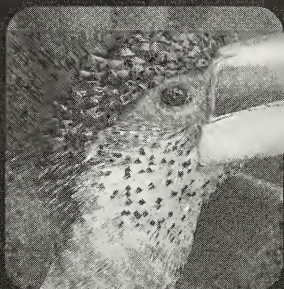
Virginia Safari Park, Natural Bridge (VA)
Duke Lemur Center, Durham (NC)

New Professional Members

Melanie Weber, Bronx Zoo, Bronx (NY)
Evan Ogden, Lake Tobias Wildlife Park, Halifax (PA)
Rebecca Sigafoos, North Carolina Zoo, Asheboro (NC)
Carie Newton, Oatland Island Wildlife Center, Savannah (GA)
Toni Piccolotti, Jacksonville Zoo & Gardens, Jacksonville (FL)
Traci Backus, Lion Country Safari, Loxahatchee (FL)
Ashley Ullrich, Lion Country Safari, Loxahatchee (FL)
Kimberly King, Lowry Park Zoo (FL)
Paul Nicholas Lefkow, Naples Zoo, Naples (FL)
Celeste Harris, Birmingham Zoo, Birmingham (AL)
Trevor Mitchell, Brights Zoo, Limestone (TN)
Amy Brannigan, Memphis Zoo, Memphis (TN)
Chelsea Weaver, Hattiesburg Zoo, Hattiesburg (MS)
Drew Barowicz, Louisville Zoo, Louisville (KY)
Jordan Adams, Fort Wayne Children s Zoo, Ft. Wayne (IN)
Kierra L. Klein, Ft. Wayne Children s Zoo, Ft. Wayne (IN)
Dana Hunter, Brookfield Zoo, Brookfield (IL)
Tracy Rein, Endangered Wolf Center, Eureka (MO)
Sydney Fitzpatrick, Kansas City Zoo, Kansas City (MO)
Laura Laverick, Kansas City Zoo, Kansas City, (MO)
Erik Storjohann, Tulsa Zoo, Tulsa, (OK)
Melakeh McDonald, Dallas Zoo, Dallas (TX)
Janice Griggs, Moody Gardens, Galveston (TX)
Sarah Drechsler, Denver Zoo, Denver (CO)
Jeanne Simpson, Cheyenne Mtn. Zoo, Colorado Springs (CO)
Matthew Rich, Pocatello Zoo, Pocatello (ID)
Meta Schmitz, Tautphaus Park Zoo, Idaho Falls (ID)
Christina Morgan, The Living Planet Aquar., Salt Lake City (UT)
Michelle Durbin, The Living Desert, Palm Desert (CA)
Rebecca Frustaci, Santa Barbara Zoo, Santa Barbara (CA)
Natalie A. Parchman, Sequoia Park Zoo, Eureka (CA)
Ali Vella-Irving, Toronto Zoo, Scarborough, Ontario (Canada)

Renewing Institutional Members

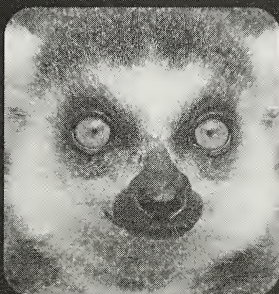
Erie Zoo, Erie (PA)	Wildlife Park, Goddard (KS)
Tiger World, Inc., Rockwell (NC)	Great Bend Zoo, Great Bend (KS)
Columbian Park Zoo, Lafayette (IN)	Tautphaus Park Zoo, Idaho Falls (ID)
Henry Vilas Zoo, Madison (WI)	Safe Haven Rescue Zoo, Imlay (NV)
	Oakland Zoo, Oakland (CA)



exploring
new ideas

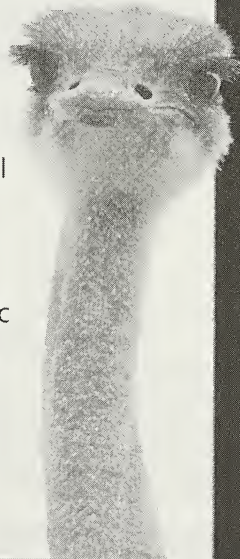


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nutrition

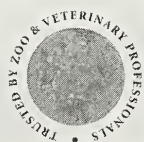


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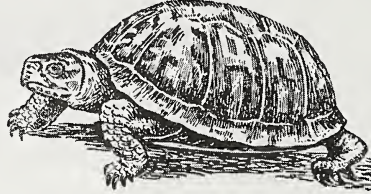
Call for Papers

For Dedicated Issue of *AKF* – CHELONIANS

We are planning in 2012 on producing an edition of *Animal Keepers' Forum* dedicated to Chelonians. We would like those interested to submit manuscripts for consideration for inclusion in this dedicated issue. Our concept for this issue would include articles both on basic Chelonian husbandry for animal care professionals with little or no experience working with this group, as well as articles relating to the most advanced techniques in captive husbandry for these species.

Possible topics might include the following:

- Chelonian Care and Management
- Chelonian Conservation
- Chelonian Field Research
- Reproduction
- Behavioral Management



Papers should be submitted electronically in MS Word only to shane.good@aazk.org. Please use Times New Roman font (10pt text body). Please put "Chelonian Issue" in the subject line of your e-mail. Papers should be no more than 10 pages in length. Any charts and/or graphs should be submitted in their native program (i.e. Microsoft Excel, Word). Photos submitted electronically should be high-resolution (minimum 300 dpi) jpg or tiff files. Be sure to include proper photo credit and a suggested caption for each photo. Please reference the complete set of *AKF* submission guidelines at aazk.org/akf-submission-guidelines/.

Be sure to also include your complete contact information including name, address, e-mail and a daytime phone where you may be reached if we have questions concerning your submission. Also be sure to include your facility and your job title at that facility.

Deadline for submission of articles for this special Chelonian Issue is **April 1, 2012**.

Call for Papers

For Dedicated Issue of *AKF* - Diabetic Animals

All topics related to the diagnosis, veterinary treatment, behavioral management, and all other considerations related to the care of diabetic animals will be covered. Deadline for submission of articles is **March 15, 2012**. See above for guidelines.

General Announcements

Attention All Photographers - AKF Needs Your Photos

Attention all photographers, the *AKF* needs your photos as potential cover photos and special feature photos throughout the issue. All photos need to be high resolution, 300 dpi or greater. All photographers will need to submit a photo release form that can be found at aazk.org/animal-keepers-forum/aazk-photo-model-release-form/. Photos that clearly depict facility logos and behind-the-scenes shots will need permission of the facility to be used.

Subjects for the photos should revolve around animal husbandry, conservation, education/interpretation, professional development, significant achievements in the industry (births, exhibits, staff, etc.), and can also include some of the more humorous or unique situations that we all come across each day in our occupations. Accompanying text with each photo is strongly encouraged.

AAZK Awards Committee Now Accepting Nominations

The AAZK Awards Committee is accepting nominations for the Lifetime Achievement Award, Jean M. Hromadka AAZK Excellence in Animal Care Award, The Lutz Ruhe Meritorious Achievement - AAZK Professional of the Year Award, the Lee Houts Enrichment Excellence Award, the Certificate of Merit for Zoo Keeper Education, the Certificate of Excellence in Exhibit Renovation, the Certificate of Merit in Conservation, the Mazuri Animal Nutrition Award, and the AAZK Chapter of the Year Award that will be presented at the 2012 AAZK Conference in Syracuse, NY. The deadline for nominations is **1 May 2012**. Information concerning the qualifications, nomination procedure, selection procedure, and an explanation of the awards may be obtained at aazk.org/committee/awards-committee/.

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What's Black and White and Red all Over?

The Cutest Animal You Will Ever See, a Red Panda of Course.

By
Nicki Boyd
Behavior Husbandry Manager
San Diego Zoo

If you have ever worked with red pandas then you are probably already agreeing with me, if not take five minutes right now to search a YouTube® video of red pandas and you will instantly fall in love. That is what happened to me 20 years ago when I began working with them at the San Diego Zoo, and I haven't stopped adoring them since. There is a lot of information out there about taking care of red pandas and this article will teach you some of the basics as well as conservation efforts going on. If you like this information then look for the dedicated *AKF* issue all about red pandas in 2013. We'll be making a call out for papers too so if you would like to contribute we'd love to have your help. Some of you reading this may have come to the workshop in San Diego at the last annual AAZK, Inc. conference in August of 2011. I really enjoyed the workshop, not only did I get to teach about one of my favorite animals but I learned from all the other red panda keepers out there. It was a great networking tool and I look forward to more of those in the future.

So, let's talk about red pandas or the FIRST panda as I like to say. They were discovered in 1825 about 50 years before the giant panda (*Ailuropoda melanoleuca*). There are two sub-species (*Ailurus fulgens fulgens*) and (*Ailurus fulgens re-fulgens*) (formally *styani*). Red pandas were once classified with *Procyonidae* and now most agree they should be in *Ailuridae*. There has been much debate over their family as well, even going as far as some scientist classifying them at one time with pinnipeds, *really*?? So over the years I have found it difficult to explain to zoo guests and panda enthusiasts what family they are really in. Our graphics at the zoo still say raccoon relatives even though our general curator and I tried to get the graphics updated before they were finished. Oh well, I'm sure that has never happened to any of you, right? A great book that just came out last year is Angela Glatson's "*Red Panda: The Biology and Conservation of the First Panda*". You can get it for around \$70 at Amazon.com®. This book has a chapter in it that will give you a great historical look at how many different scientists have classified them in so many families and the scientific ways they have determined the two sub-species and most objective classifications to date.

Diet and Medical Husbandry

The diet varies from zoo to zoo but I will give you diet recommendations from our nutritionists and research data from the field. Our diet for a female weighing around 6 kilograms (13.2 pounds) is as follows.

1	LEAFEATER (MarionvZoological®)	50 whole	300g	SMTWRFS
2	APPLE	90g		SMTWRFS
3	GRAPE	4 whole		SMTWRFS
4	BROWSE, BAMBOO, ASST SPECIES	15-1 m branches		SMTWRFS

We weigh them once a month and make sure they are staying within their target which can be adjusted by a body score that our nutritionist uses to maintain a healthy weight. They will check for fat build up on abdomen and back. If you can get your pandas trained for palpation this really helps. The fruit is great for training and we free-feed the leafeater biscuits in bowls or enrichment devices. I will talk more about training further down in this article. The bamboo is offered two to three times per day. Our horticulture team cuts it fresh and delivers it to the area. On the weekends it is bagged on Friday and put into a cooler then delivered with our daily forage order. It dries out quickly so you should put it in water right away. We have created several water containers. Four-inch PVC tubes with a cap on

the end and a hole in the side can easily be hung on a lag bolt drilled into a tree and our newest exhibit has it on display so we use large sections of bamboo culm that is dried out with a hole drilled in it and that is hung with the bolts drilled into the trees (for a more natural look). There are many species of bamboo that can be grown in all climates and it grows fast so hopefully if you have red pandas your zoo will support growing fresh bamboo to feed out. In the wild bamboo can be up to 98% of their diet (99% of the giant pandas' diet). Researchers have found they prefer species *B. spanostachya*. Unlike giant pandas they eat only the leaves. They also eat berries, fruits, some meat such as birds, eggs and rodents. They have a rapidly moving digestive tract. Input versus output is about 4200 grams of food intake while they excrete 2750 grams, thus lots and lots of feces. Most feces are found up in trees in field studies (57%), so having a high platform (or as I like to call it a poop platform) can help make a latrine for them that you can hopefully set up for easy cleaning and disinfecting.

Pandas can get overweight very easy and that can cause a dystocia for breeding females so our veterinarians and nutritionists keep a close eye on them, and we make sure they stay around their target weight. We sometimes have had to separate the male and female during feeding if she starts eating his food too, which can be difficult if they don't want to shift. We have also had to separate for daily medications. As they get older dental disease is quite common and a low dose of antibiotics with 3 months on, 3 months off has really kept the gingivitis under control. Some of the other medical issues you need to stay on top of are skin issues. Some zoos with a lot of humidity have had an issue with ringworm; another good reason to train them for tactile palpation, their fur is so thick it will hide sores and injury. We had an issue with hot spots and were able to treat topically with Silvadene but if we didn't have our hands on the panda we may have missed it until it was a severe sore.

For vaccination recommendations start at 8 weeks, then 3 weeks until 16 weeks, killed rabies vaccine every 3 years after the 1st year. For animal ambassadors that have public contact we vaccinate against rabies every year and Distemper, Feline Herpes/Calici/Panleukopenia every three years. They can be trained for hand injections or squeeze trained pretty easily.

Exhibit Design and Nest Box Recommendations

They are an arboreal animal that is built for a cold climate, they need shade, ideally a misting system and air conditioning unit for the warmer regions and hotter months. High climbing spots with shade, ideally natural trees to climb up and sleep in make better displays. They have an approximate Four-foot jump distance (not great jumpers but great climbers), so five to six foot walls with a turn back and smooth surface will work fine. Ideally the exhibit would not be surrounded by visitors, giving them some escape from guests. While they do warm up to familiar keepers and participate well with training (once comfortable) in many zoos they can still be shy and easily stressed. If they pace a lot in a warm climate they can quickly overheat with that thick fur coat. Having access in hot months to air conditioning is highly recommended.

Nest boxes (SSP recommends 3 options, and boxes should not get over 70 degrees Fahrenheit), should be L shaped for females to feel hidden. I have seen many different nest boxes, in the wild they would prefer a large hollowed out log or small cave; these have been simulated in some captive exhibits and worked well. In most zoos I see wooden nest boxes, many on legs to get them up off the ground, again with options for the female. Before giving birth you will find her dragging lots of nesting material in the box. I have had hay get moldy from getting wet so we prefer pine wood shavings or excelsior (wood wool) and the female tends to drag in a bunch of dried bamboo to make her own. Plants in the exhibit will probably vary greatly so I imagine there are many keepers out there with suggestions (again another great time to share in the red panda issue in 2013). Many facilities have air conditioning in the denning area; they usually give birth mid-summer so here in the United States most of us are pretty warm so to decrease mortality keeping them cool is highly recommended.

Breeding

Red pandas reach sexual maturity at around 18 to 22 months, the earliest red panda to give birth was about 25 months-old. They breed in late winter and their parturition is usually in early to mid-summer. Studies show they are induced ovulators and can delay implantation, so knowing exact birth dates can be tricky. Gestation is typically 114 days (can be shorter due to time of implantation) and can be anywhere from 98 to 158 days. The SSP recommends cameras for the den box. There are many different strategies for successful breeding and they vary so you have to find out what works for your facility. Some separate the female from the male, others leave them together. Some fathers have been seen playing with them once they are out of the next box, but normally would have nothing to do with raising offspring. Experts say that if the pair is very compatible you have a better chance of her tolerating him during birth. If she is easily stressed it may be best to move him out or at least separate them. Some facilities lock the female in the back with her cubs for the first month. We have had to hand-raise youngsters at the San Diego Zoo. There is a high mortality so a trained female is much more likely to let you get your hands on the cubs, weigh them and check vitality. If they are not gaining you can supplement feed or pull for hand-rearing. Aspiration is very common with bottle-fed neonates so a well-developed hand-rearing protocol should be in place in case you need to pull cubs.

Anyone can contact me at the zoo at nboyd@sandiegozoo.org and I will get you in touch with the appropriate nursery staff to get you set up with our best practices and formulas.

Training and Enrichment

Goals for training at our facility were prioritized by our veterinary department. In a perfect world these are the priority behaviors to train in order of importance:

- Shift/station
- Scale
- Crate
- Body exam: tactile (topical treatment), mouth open, ears, eyes, genitalia, measurements, ultrasound.
- Injection training
- Optional leash training as ambassador (male best candidate if in breeding program during non-breeding season).

There are many successful training programs all over the country, with patience and trust these animals are extremely intelligent and will to learn. Of course, each individual is different and time and energy allotted toward training may affect the success. But at minimum you should be able to crate train and/or scale train them. With such a large tail, use a tub, half crate or platform to make sure all of their tail is being weighed too. While being overweight is a medical concern they can easily get underweight too and with all that fur it's difficult to tell, which is another great reason to train palpation. The SSP would like to collect measurements again from captive pandas and have it sent to the AZA SSP coordinator. If you have them in your institution your Institutional Representative (IR) should have the 2011 recommendations which have a chart on what measurements they would like such as girth, nose to tail and more. I can also send you the diagrams and contact information if you're interested. Red pandas can be difficult to enrich, but training is enrichment too. They should be provided fresh bamboo daily (live plants get eaten too quickly). Also know your bamboo before planting any in the exhibit; some can be slightly toxic according to our nutrition staff. Young pandas more curious will climb, explore, forage, pounce, scent mark, etc. and will interact more with enrichment devices such as rolling balls around to get the food out. Many panda keepers say if it's too difficult they often do not interact with it. That doesn't mean don't keep trying new things. Some suggestions from the workshop were large thick ropes for them to climb up, snow, ice, ice blocks with food, hanging baskets, hid food in hay,



RED PANDA
NETWORK



Red Panda "Fuji" and Behavior Husbandry Manager Nicki Boyd at San Diego Zoo. Photo by: Ken Bohn, San Diego Zoo

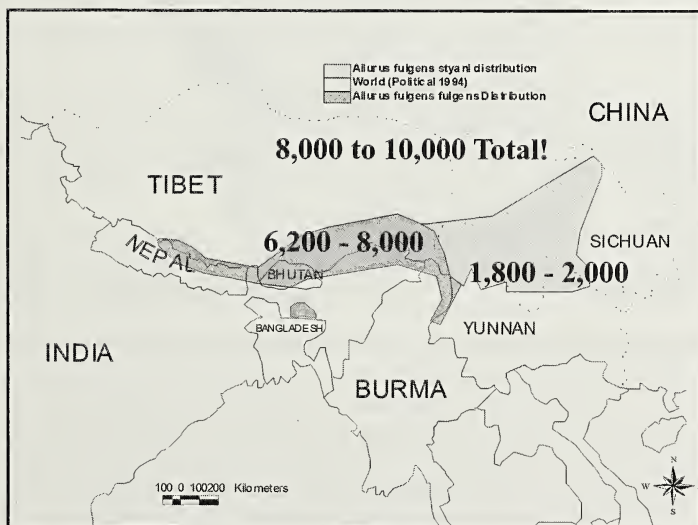
back areas, boxes or bags, scents and things like PVC or boomer balls with holes to get the food to fall out.

This is one of my favorite things to get people excited about, The Red Panda Network. It's a non-profit organization dedicated to saving habitat for wild, red pandas. I am currently on the Board as President and work with a great group of dedicated individuals, all passionate about saving red panda. We recently became Conservation Partners with AAZK, Inc. and are very excited about this new relationship. Currently we have a team of

researchers in Nepal. They work with the local communities educating them about red pandas and help teachers with curriculum for the classrooms to teach children about them. They have forests they do transects through and note tree growth, panda sightings, check the camera traps and work with farmers to reduce the impact on the habitat. Their current threats are grazing cattle, road building, cutting down trees for firewood, bamboo cutting for both food for cattle and building materials. We use a lot of bamboo here in the United States, so be sure you are buying sustainable products. The population is very hard to assess as much of the habitat is hard to reach in mountainous terrain. The best estimates of the population are around 10,000 total red pandas left in the wild.

What we try to teach people is: "Why are red pandas important to save?". Forests where red pandas live support: 1/5th of the world's human population with clean water, clean air, and it sequesters carbon emissions from Europe and Asia. We need your help. Many AAZK Chapters have already donated, and many zoos have given us funding to keep our conservation efforts going. The IUCN (2009)

red-listed red pandas as Vulnerable, yet only 11% of their habitat is protected. Our researchers still find hunting, poaching and trapping for pets going on in the forests. These are the forests we are currently working in.



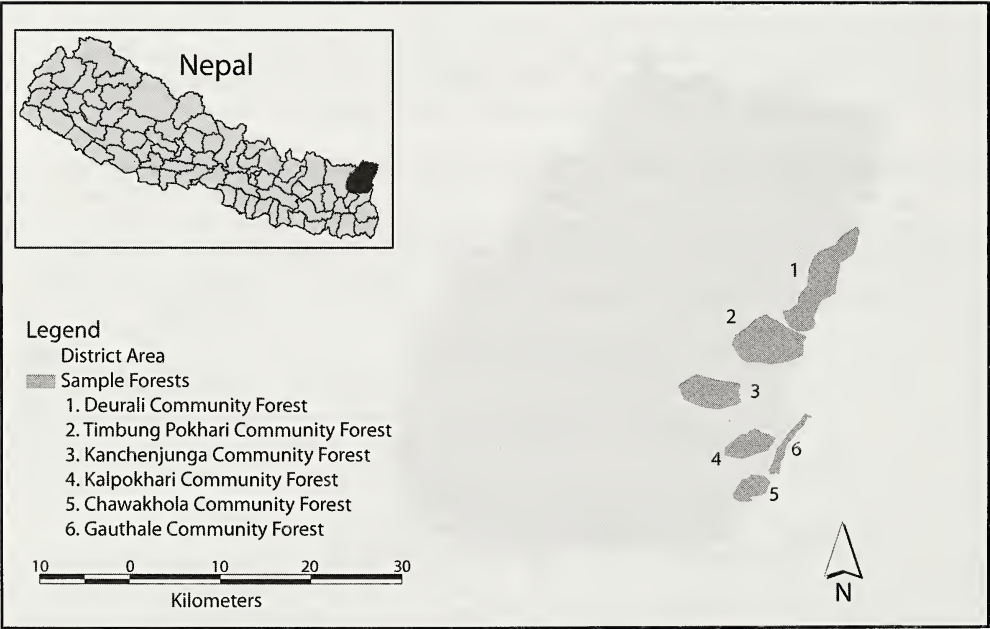
We have collaborated with 12 villages, trained 39 Forest Guardians which support 195 villagers, and monitor 12 community-forests. With WWF-Nepal and the government of Nepal we created the first country-wide survey

of red panda and have camera-trapped the first wild, red panda.

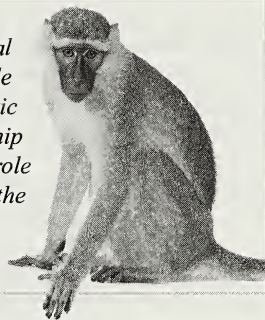
We can only do this conservation with donations. If you are inspired to help please contact me or visit our website at redpandanetwork.org and see if you can adopt a panda, support the forest guardian training, help us with our population studies, or join us on an eco-trip to Nepal to see red pandas in the wild. We are also getting zoos to participate in International Red Panda Day (IRPD). We have designated 15 September 2012 as IRPD, and the last two years over 30 zoos and 40 elementary schools around the world have participated and many create their own day that works at their own facility. That is great, we appreciate the awareness and support, we have activities you can get zoo guests involved in, we have a packet we can send you with all the instruction and activities to make is easy for you or your docents to help set up. Please join us and zoo's all over the world support the conservation of red pandas and get involved! We appreciate your help saving possibly the cutest animal alive.



Camera trap photo
from redpandanetwork.org



Editors Note: *The following article may not be typical for the Animal Keepers' Forum, but in consideration of our coverage of the Zanesville Tragedy and the resulting legislative process on the ownership of exotic animals, it seemed appropriate to publish this analysis of the ownership of nonhuman primates. Inevitably, the court system may play a large role in the ownership of exotic animals, so it is important to understand the past if we are to improve the future for exotic animals.*



The Myth of Domestic Monkeys: Common Law and Nonhuman Primates

By Brett Bannor
Atlanta, GA

Abstract

Common law courts issuing opinions on whether monkeys are “domestic” or “wild” animals have tended to rule or suggest that monkeys are domestic, a view at odds with the belief of mainstream primatologists and not in the best interests of both nonhuman primates or the public. Here, the history of this odd legal doctrine is traced, some court opinions are analyzed, and fault in their reasoning is assessed. It is concluded that while statutory law has often rendered obsolete court decisions on primates, the common law notion of monkeys as “domestic” animals is still a concern in circumstances where these precedents have not been nullified by legislation. **Key words:** domestic animal, wild animal, common law, animal law.

Introduction

A 1960 decision by a New York Court declared that whether or not a rhesus macaque (*Macaca mulatta*) is a wild animal was not a matter of law that a judge could rule on, but rather was a question of fact for a jury (*Abrevaya v. Palace Theatre & Realty Co.*). In 1977, a Texas Court asserted that a three pound monkey, species unspecified, was “domesticated” (*Pate v. Yeager*). Finally, a 1986 ruling by the Appellate Court of Illinois held that an individual possessing a lesser spot-nosed guenon (*Cercopithecus petaurista*) as a pet was not guilty of violating a local ordinance prohibiting ownership within city limits of any animals save “household pets” (*City of Rolling Meadows v. Kyle*).

Such court decisions cannot be reconciled with the prevailing attitude among professionals who provide care for nonhuman primates. The Primate Taxon Advisory Group of the American Zoo and Aquarium Association (AZA), for instance, has drafted its “Primate Pet Trade Position Statement” which states in part:

Pet primates pose a risk to public health and safety through communicable illness/diseases... and injuries sustained during sudden and unpredictable episodes of aggressive behavior. (csew.com/newworldprimate/default.htm)

In light of this dichotomy between the convictions of primatologists who provide husbandry for prosimians, monkeys, and apes, and court decisions such as *Rolling Meadows v. Kyle*, it is instructive to examine how the legal status of nonhuman primates has been assessed by the common law. This article is an effort to provide an understanding of the historical framework and the legal doctrines which jurists have heeded in instances where litigation included a pet monkey or ape. I also offer criticism of particular court decisions, suggesting that a more thorough understanding of the natural history and behavior of primates would have better served the ruling.

Except where noted, information on court decisions comes from the published case reports; legal citations for these reports are in the appendix. This article is written with the scientist in mind; thus considerations of the various cases leave out elements of these decisions that are of importance only to legal practitioners.

The English Common Law Background

The United States of America is a common law country, that is, the ancestry of America's legal customs and traditions lies in 12th century England (Churchill 2001:409-16). A characteristic of the common law tradition is the discretion given to judges to interpret statutes and to rule on legal questions not specifically addressed by legislative bodies (Merryman 1985:49, Cantor 1997:41).

At Oxford University in 1753, Sir William Blackstone (1723-1780) became the first legal scholar to deliver university lectures on the topic of English common law (Boorstin 1996: xiv). His lecture series became the basis for a four-volume book *Commentaries on the Laws of England*, published between 1765 and 1769 (Boorstin 1996: xix).

Often referred to as *Blackstone's Commentaries*, this work had a major influence on law in England and in the United States. Boorstin (1996: 3-4) noted that since law books other than Blackstone's were scarce in America's early days, "In the first century of American independence, the *Commentaries* were not merely an approach to the study of law; for most lawyers they constituted all there was of the law."

Given Blackstone's influence, it is instructive to examine the *Commentaries* for its analysis of animals in general and nonhuman primates in particular. Chapter 25 of Volume 2 is entitled "Property in Things Personal." Here, Blackstone describes the manner in which English law classifies animals where possession is concerned:

(With regard to animals... there is a great difference made with respect to their several classes... They are distinguished into such as are domitae, and such as are ferae naturae; some being of a tame, and others of a wild disposition. In such as are of a nature tame and domestic, (as horses, swine, sheep, poultry, and the like) a man may have as absolute a property as in any inanimate beings; because these continue perpetually in his occupation, and will not stray from his house or person, unless by accident or fraudulent enticement, in either of which cases the owner does not lose his property... But in animals ferae naturae a man can have no absolute ownership. (Blackstone 1979: 389-90, italics his).

Assigning a particular species of animal to the *domitae naturae* (domestic) group or the *ferae naturae* (wild) group is for Blackstone a function of the degree to which a human being has the ability to own the creature. While categorizing an animal's status based on human possession may seem arcane or even objectionable to modern scientists, Blackstone's explication is significant not only because all the cases considered in this paper involve ownership, but also because these cases curiously suggest that nonhuman primates are *domitae naturae* rather than *ferae naturae* as primatologists would argue.

May v. Burdett and Strict Liability

A milestone English case is *May v. Burdett*, decided by the Queen's Bench in 1846. The case is frequently cited as the source of the doctrine of strict liability for any injury or property damage stemming from keeping wild animals in captivity (Speiser, et al. 1983:527, Waisman, et al. 2002:156). *May v. Burdett* concerned a bite inflicted by an unconfined monkey; the species is not identified. According to the plaintiff's brief, on 2 September 1844 while the monkey was at large:

(It) did attack, bite, wound, lacerate and injure... Sophia... then and still being the wife of said Stephen May, whereby the said Sophia became and was greatly terrified and alarmed, and became and was sick, sore, lame and disordered, and so remained and continued for a long time, to with from the day and year last aforesaid to the time of the commencement of this suit; whereby, and in consequence of

the alarm and fright occasioned by the said monkey so attacking, biting, wounding, lacerating and injuring her as aforesaid, the said Sophia has been greatly injured in her health.

Burdett's attorneys did not deny that Sophia May had been bitten. Instead, they attacked the plaintiff's declaration for failing to allege any negligence on the part of the defendant. That is, counsel for May did not show any specific ineptitude in Burdett's conduct that could make him liable for what his monkey did. Burdett's attorneys began their pleading before the court by cautioning the judges that such an interpretation of the law could have sweeping consequences:

(T)he plaintiff assumes that it is illegal even to keep a destructive animal, as is done at the gardens of the (London) Zoological Society and other menageries, and that, however carefully such animal may be kept, yet, if it escapes, without any fault on the owner's part and does damage, or even if an incautious person be hurt, or an excessively timid person terrified, by the animal while under proper restraint, the owner is answerable.

Some melodrama is apparent. May's attorneys did not assert that simply keeping a wild animal was illegal. As for what might happen if an "incautious person be hurt," one of the judges hearing the case directly challenged May's counsel on this point with the question "Suppose (the monkey) had been confined in a cage, and the plaintiff's wife had put her hand in." To which the attorney replied "Actual misconduct in the plaintiff might be a defence." This brief exchange between bar and bench elucidates the limits of strict liability for keeping nonhuman primates or other wild animals. The judge was indicating—and May's lawyer was conceding—that just because someone owns a wild animal, he may not be liable if a second rational adult behaves foolishly around the animal. Had Sophia May stuck her hand in a cage of monkeys and been bitten, the negligence would be hers, not Burdett's. That circumstance, however, was immaterial in this case, since Burdett allowed his monkey to roam.

The court ruled in the plaintiff's favor. Lord Denman issued the judgment of the court, declaring:

(W)hoever keeps an animal accustomed to attack and bite mankind, with knowledge that it is so accustomed, is prima facie liable in an action on the case at the suit of any person attacked and injured by the animal, without any averment of negligence or default in the securing or taking care of it. The gist of the action is the keeping of the animal after knowledge of its mischievous propensities.

As U.S. Supreme Court Justice Oliver Wendell Holmes explained, this means that "If such an animal escapes and does damage, the owner is liable simply on proof that he kept it"(Holmes 1963:122). The doctrine of strict liability for injuries caused by a wild animal is in contrast to the common law view of liability for domestic animals. Traditionally, an owner of domesticated ungulates, cats, or dogs is only liable upon proof that he knew that the particular animal had an aggressive disposition and therefore constituted a special risk (Prosser et al.1984:542).

Accordingly, to the defendant owner of a nonhuman primate that had bitten someone, it would be preferable if his animal was legally considered domestic so that he would be liable only upon a showing that he was aware it had a nasty demeanor, rather than having the same animal considered wild so that the owner bore strict liability. The key legal question arising in a tort case involving a nonhuman primate can thus be expressed in this manner: Is the owner liable for any injury his animal does because it is a monkey and therefore an unpredictable wild animal? Or is the owner only liable because it is *that particular* monkey, an individual nonhuman primate with a propensity towards aggression? In other words, could one monkey be, to use Blackstone's terms, *ferae naturae* while another primate of the same species is virtually *domitae naturae*?

If one was to consider nonhuman primates as being a completely wild animal and potentially dangerous, the answer would seem to be that the demeanor of the individual monkey makes no

difference in terms of liability. Holmes, for instance, explains that the basis for strict liability in the case of dangerous animals such as tigers is that “if they escape, they are very certain to do harm of a serious nature” (1963:123). He does not suggest that it matters whether the particular cat is docile to some degree; it is an escaped tiger and that is that.

Courts have in some cases, however, viewed monkeys differently than tigers. From this perspective arises the notion that a monkey may occupy a legal position closer to domestic animals than to wild ones.

Case Reports and the Species Question

Primatologists examining court reports involving monkeys or apes might wish to know what species of nonhuman primate figured in the litigation. To a primatologist there is a great deal of difference between a capuchin and a baboon; when a case report simply refers to the relevant animal as “a monkey”—as is so in *May v. Burdett*—the scientist is denied a key piece of information. Court reports, however, are written for legal practitioners and not scientists; thus wild animal case law often is unclear on the species involved.

Some reports do seem to identify the relevant species of nonhuman primate. Since these are legal and not scientific documents, however, one cannot be entirely certain that a species is correctly identified. I can attest to this because of the official case report of *Berry v. City of Monroe*, although here a wild cat was involved, not a primate. The report refers to a “three-legged leopard.” I worked as an animal keeper at the zoo involved in the suit; the handicapped feline was not a leopard (*Panthera pardus*) but the much smaller serval (*Felis serval*).



Serval (*Felis serval*)



Leopard (*Panthera pardus*)

Monkey Business, Literally

Canada, like the United States, has a common law origin. In the 1912 Ontario case of *Connor v. The Princess Theatre*, a young boy was bitten by a monkey of an unspecified species that was a performing animal in a traveling show. Providing background to its opinion, the *Connor* court wrote:

Animals have been classified as: ferocious, dangerous, mischievous, and harmless. The first three are of wild nature... There is a special class naturally wild and mischievous which have been trained to become performing animals, such as bears and monkeys, and these it may be lawful to keep and use for the purpose of gain or amusement; whereas in the case of ferocious beasts the keeping of these is by some judges accounted a wrongful act which makes the keeper responsible for any injury inflicted by them without proof of negligence.

In support of this doctrine, the opinion cites *May v. Burdett*. The monkey owned by Burdett apparently was a personal pet, while the *Connor* monkey was used as part of a business’s operation—“for gain

The 39th Annual AAZK National Conference

Syracuse ~ September 23-27, 2012



**The Rosamond Gifford Zoo AAZK Chapter in Syracuse, NY
is proud to host the 2012 National Conference.**

DID YOU KNOW?

- National Geographic's Green Guide named Syracuse "One of America's Top 20 Green Cities."
- The dental chair was invented by Syracuse's Milton Waldo Hanchett in 1840.
- Until 1900, the bulk of the salt used in the United States came from Syracuse, hence our nickname, "The Salt City."
- Syracuse native, Charles F. Brannock, invented the measuring device that tells the shoe salesman what your size is.
- The New York State Fair, which is held in Syracuse, is the longest running State Fair in the country; it started in 1848.
- The 24-second shot clock, used in all NBA games, was invented by Danny Biasone, the late owner of the Syracuse Nationals (now the Philadelphia 76ers).

There's a whole lot more for you to learn about our city and we look forward to welcoming you to Central New York. As we say here in Syracuse, "Let us surprise you!"

Hotel Accommodations



The Sheraton University Hotel and Conference Center opens its doors to attendees next fall. Located in the heart of the Syracuse University Campus, the hotel is in close proximity to many shops, eateries and, of course, the famed Carrier Dome! Room rates are \$119 per night (plus applicable state and local taxes). Complimentary parking is available for all overnight guests and the hotel will provide free shuttle service to the airport (SYR) and the Regional Transportation Center (RTC). For more information about our host hotel or to book your room, visit: http://www.rgzaazk.org/hotel_information.html

Transportation



By air: Conference delegates should fly into Syracuse Hancock International Airport (SYR). There will be free shuttle service to our host hotel the Sheraton University Hotel and Conference Center.

By Train or Bus: Delegates should arrive at the William F. Walsh Regional Transportation Center (RTC). The RTC is home to train and bus services provided by Amtrak Greyhound and Trailways.

By Car: Syracuse is located in the heart of New York State with easy access to Interstate 90 and Interstate 81.

Registration



Conference Registration will begin in March and will be offered online **only**.

We will check member registrations through the National AAZK Board, so please make sure your National dues are current or paid prior to registration.

Program Highlights



We welcome Deborah Olson, Executive Director of the International Elephant Foundation as our Keynote Speaker. Guest speakers also include Dr. Dennis Schmitt, Director of Veterinary Care and Research and Conservation Programs at Ringling Bros. and Emily McCormack, Curator at Turpentine Creek Animal Refuge.

As AAZK makes the transition into offering workshops at conferences, themes include husbandry management of Hoffmann's two-toed sloth and Humboldt penguins, as well as restraint techniques for ungulates.

Additional workshops will also be offered for areas of training and public relations. We are honored to have our head veterinarians from Cornell University to instruct classes on darting, anesthesia and zoonotic disease prevention.

AAZK Professional Development Committee workshops will include:

- Team Building
- Professional Development at Your Zoo
- African Wild Dog Husbandry
- Emergency Preparedness Workshop: Do you Know What to Do?
- Basics of AZA Population Management
- Creating a Successful AAZK Chapter
- Bowling for Rhinos: Creating a Successful Event
- Polar Bears International Leadership Camp
- Raptor Workshop: Intro to Falconry and How to Make Your Own Falconry Equipment
- Quarantine Protocols: Training and Enrichment

Rosamond Gifford Zoo will be hosting the following workshops:

- Management and Prevention of Zoonotic Disease
- Anesthesia and a Zoo Keeper's Role
- A Practical Look at Darting
- Elephant Husbandry and Training
- Ungulate Restraint
- Penguin Husbandry and Restraint
- Small Mammal and Primate Capture and Restraint
- Sloth Husbandry and Training
- Creating a Zoo Keeper Driven Public Relations Program

This is the 3rd call for papers and posters!



Our conference theme "On the Path toward Conservation" will highlight in-situ conservation efforts, research projects and programs that encourage visitors to protect wildlife and wild places. We will be accepting abstracts that focus on the theme of the conference or innovative approaches to zoo keeping including animal welfare, husbandry, education, conservation and training. Abstracts should be no more than 250 words and submitted as a Microsoft Word document via e-mail to submissions@rgzaazk.org

Please include the following information:

- Name of authors and presenter
- Institution /Affiliation
- Position /Title
- Title of Work (please specify poster or paper)
- AV requirements
- Contact information (please include e-mail)

Deadline for Abstracts is May 1, 2012

Icebreaker



Our conference icebreaker will be held on Sunday, September 23 at the Museum of Science and Technology (MOST) in historic Armory Square. The MOST is an interactive museum featuring hand-on exhibits that will be sure to bring out your inner child. Experiences will include a visit to the Planetarium and Space Gallery, Discovery Cave and a Telecommunications Center with an Amateur Radio Station. For more information visit www.most.org or armorysquareofsyracuse.com

Pre-conference Trip



Seneca Lake Wine Tour • Saturday September 22, 2012

Our pre-conference trip will feature five wineries and one brewery. Today, Seneca Lake Wine Trail's 34 member wineries have won hundreds of national and international medals and are recognized as world-class producers of Riesling, Pinot Gris, Gewurztraminer, Cabernet Sauvignon, Merlot, Cabernet Franc and Honey Wines (Meads). Please check out our website for more details.

Post-conference Trip



Seneca Park Zoo • Friday September 28, 2012

Our post-conference trip will be hosted by the Seneca Park Zoo AAZK Chapter in Rochester NY. The Seneca Park Zoo opened in 1894. It's a 16-acre facility that is located within Frederick Law Olmstead Park. The zoo is home to over 300 animals including New York State's only African elephants and Bornean orangutans. The most recent addition to the zoo is a 23,000 sqft, state of the art elephant facility and baboon enclosure. The final portion of "Africa" is a new lion exhibit, and will open in the spring of 2012.

For more information on the
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or amusement,” as the opinion put it. Blackstone had declared that animals were either domestic or wild, but *Connor* held that the “wild” category could be further subdivided into “ferocious, dangerous, or mischievous,” with the key to determining whether an animal was “mischievous” being whether it could be taught to perform so that its owner could reap a financial benefit from its antics.

This is an odd way of assessing the matter. Essentially, the Ontario court reasoned that monkeys were “mischievous” but not “ferocious” or “dangerous” because a business interest was involved. But just as a business could be made by charging people to watch monkeys do tricks on cue, so too could a business be made of charging people to see a tiger in an enclosure; it is not apparent why the monkey should be categorized differently from the tiger when both animals can be put to commercial use. Of greater concern, we see in the *Connor* case a movement towards viewing nonhuman primates as not strictly *ferae naturae*. From there it is a small step towards regarding monkeys as *domitae naturae*, more like a dog than a truly wild animal.

Of Deer, Bees, and Monkeys

Unlike *May* and *Connor*, in the 1935 Georgia case of *Candler v. Smith*, the animal did not physically attack the victim. In *Candler*, a Mrs. Smith walked out of her home towards her automobile in the driveway. Suddenly, she noticed that a large baboon was in the car; this animal had escaped from Candler’s private zoo. Frightened, Mrs. Smith turned and ran back to the house, tripping in the process. She stated that the primate was pursuing her, but admitted that she reached the safety of the house without being attacked; thus her physical injuries were entirely the result of falling while fleeing.

The legal difference between actual injury, as in *May* and *Connor*, and injury resulting from fright and flight, as in *Candler*, is beyond the scope of this paper. Significant here is that while the Georgia Supreme Court regarded Candler’s baboon as a dangerous wild animal, it prefaced its judgment with these comments:

The doctrine, promulgated in some jurisdictions, that where an animal, although classed as ferae naturae, is susceptible of substantial domestication, as the bee, deer, and monkey, the owner is not liable in the absence of proof of negligence in the manner of keeping it, or of proof that it was of a vicious disposition, and was kept after the owner had knowledge thereof..., is not applicable to the pleadings in this case, as there was no suggestion therein that the baboon had ever been trained or become domesticated to any extent.

Five cases are then cited. Four dealt with injuries from bees or deer; only one referenced case—*Connor v. Princess Theatre*--involved a nonhuman primate.

The *Candler* summation quoted is troubling for two reasons. First, by stating that there was no suggestion that this baboon “had ever... become domesticated” the Georgia court hinted that a different outcome would have been possible in this case if the animal was a “domesticated” baboon. In other words, it treats the domestication of a baboon as a real possibility.

Second and more importantly, *Candler* posits a legal classification in which monkeys are viewed similarly to deer and bees. This position lacks scientific merit. Because bees and deer have a long association with humans, they are domesticated in a sense that monkeys are not. Beekeeping was highly developed by the age of the Egyptian Pharaohs about four thousand years ago and these insects perform an agricultural function as pollinators of food and forage crops (Barth 1991:39; Proctor, et al. 1996:354-64). One species of deer, the reindeer (*Rangifer tarandus*), was domesticated about three thousand years ago, and a number of other Cervids are semi-domesticated (Putnam 1988:155-61, Nowak 1999: 1131). In Georgia, where *Candler* occurred, current statutory law includes regulations involving “the production of farmed deer as an agricultural operation” (Ga. Code Ann. § 4-4-170 et seq.); nowhere does Georgia law address “the production of farmed monkeys as an agricultural operation.” It is unreasonable to argue that nonhuman primates have the same degree of association with human beings to include them with bees and deer as animals that are “susceptible to substantial

domestication.” Nevertheless, this would not be the final appearance of “domesticated monkeys” in court.

Matter of Law, Finding of Fact, and Expert Witnesses

If the *Candler* court’s position that nonhuman primates could be domesticated to some degree is accepted, the inevitable legal question to arise is whether monkey domestication is a matter of law or a matter of fact. In other words, can a judge rule in a liability case that for purposes of the litigation before him that a monkey is domesticated? Or is this a finding of fact which requires that a seated jury hear testimony from expert witnesses?

The matter of law position was taken by the Court of Civil Appeals of Texas in the 1977 case of *Pate v. Yeager*, in which a monkey bit a four-year-old girl’s finger. Once again the case report does not identify the species of nonhuman primate involved, although it does state that the animal weighed three pounds, had been a family pet for 26 years, and was named “Mr. Jim.”

The court declared that there was no evidence Mr. Jim had ever deliberately attacked anyone before the Pate child was injured, although it acknowledged that testimony introduced in trial stated that this monkey bit a man two years earlier. However, the report notes, the man had teased the monkey and given it “cigarettes, which made him nervous.” There is no mention whether the cigarettes were lit when they were presented to the animal, but in any case the Texas court was apparently willing to accept the proposition that a monkey bite is not a “deliberate” act if it is harassed with words, gestures, or tobacco.

Since the “cigarette bite” incident was discounted, the court thus held:

There is no evidence that... the defendants had... any reason to believe that monkeys generally, and Mr. Jim in particular, were of a vicious nature or had a bad disposition... We hold that monkeys of the type here involved are properly classified as wild animals which are capable of being domesticated or tamed. The evidence shows conclusively that Mr. Jim was domesticated. Therefore, in order to hold the defendants liable for injuries caused by Mr. Jim, there must be proof that defendants knew that the animal was accustomed to do mischief, or that the defendants committed acts of negligence which proximately caused the injury. (Emphases mine)

Because the case report does not specify what species of monkey Mr. Jim is, the phrase “monkeys of the type here involved” is unclear. Was the court declaring that the only “types” of monkey that could be domesticated were small ones like Mr. Jim? A careful reading suggests that the court was holding that any type of monkey could be domesticated. Notice that instead of simply declaring that the Yeagers had no reason to believe that *Mr. Jim* was “of a vicious nature or had a bad disposition” the court in dictum said that the defendants had no reason to believe that monkeys generally—that is, *any* monkey—were vicious or of a nasty demeanor. As in *Candler v. Smith*—which the *Pate* court did not cite—monkeys were with little comment designated a group of animals that could be domesticated.

Abrevaya v. Palace Theatre & Realty Co., a 1960 New York case, took the position that a nonhuman primate’s domestic or wild nature must be decided by a jury. Once again a child was the victim; as in the *Connor* case a performing primate was involved. The Abrevaya family was attending a show in which “Baudy’s Greyhounds & Monkeys” performed. A monkey riding on a greyhound’s back suddenly jumped off the dog, ran out into the audience and bit the Abrevaya infant. It was said to be a rhesus macaque (*Macaca mulatta*), presumably a young one since it was perched atop a greyhound.

The Abrevaya family requested summary judgment—that is, they wished for the judge hearing the matter to rule that there was no reason for a jury trial as he could hold as a matter of law that a rhesus macaque was a wild animal. Such a ruling by the judge would have allowed the plaintiffs to prevail on a theory of strict liability.

Summary judgment was denied. The judge did not rule that a rhesus macaque was a wild animal—but neither did he rule that it was a domesticated one. After reviewing the traditional common law distinction between wild and domestic animals, he wrote:

It has not been suggested by the plaintiffs... that I take judicial notice of the claimed vicious and refractory habits of the monkey... But that is what... this application comes down to... No scientific data were presented to support the taking of judicial notice, one way or the other... (L)egal authorities alone have been submitted—and they are in disagreement... In my view, judicial notice of such a matter must be bottomed upon more universal acceptance...

Having acknowledged that law may not, by itself, have the definitive say on potentially dangerous primate behavior, the opinion goes on to state that science could hold a better key to resolving the litigation:

I am of the opinion that the testimony of an expert in the science of zoology would be more helpful in resolving the issue of fact that the citation of texts and digests on the law... I hold that whether a monkey of the rhesus species... is a wild animal or a mild one, and if the former, whether it may be trained to tameness is a question of fact.

Thus, a jury trial was ordered to resolve the matter.

No follow up to *Abrevaya* is reported in the legal literature, but another reported case gives greater insight into the testimony of expert witnesses on primate behavior, although the content of this testimony left much to be desired from a scientific standpoint. In 1978, the Oklahoma Supreme Court heard the case of *Whitefield v. Stewart*. Again a child was involved, in this case a girl of six. The primate in the litigation was reported to be a Humboldt's woolly monkey (*Lagothrix lagotricha*) that the defendant had owned for eight years.

This decision broke no new ground and would be tangential, except that the *Whitefield* opinion references some odd testimony given in the lower trial court on the nature of nonhuman primates:

Expert witnesses on primate behavior testified that the woolly monkey belongs to a class of new world monkeys which are very popular pets, but that they were not domesticated because domestication is a genetic problem. One expert witness said that from the references she had read woolly monkeys make good pets... Another expert witness testified that books he read indicate the woolly monkey is gentle and trusting and can be tamed, and added that, based on the evidence he heard and what he had read, there would be a very low probability that a tame woolly monkey would bite.

These “experts” were not identified by name or title, but they certainly do not seem to have been personally acquainted with nonhuman primates judging by their testimony. Their remarks were based on what they said they had read, not on personal experience providing husbandry for monkeys. Those having first-hand contact with monkeys, such as zookeepers or researchers, would be unlikely to declare in a court of law that woolly monkeys “make good pets” or that there is “a very low probability that a tame woolly monkey would bite.” While these experts denied that nonhuman primates could be considered domesticated, they suggested that in spite of their wild nature at least some types of monkeys were suitable to keep around the house. It is but a short step from this position to a court interpretation that monkeys were properly included in an ordinance that used the phrase “household pets.” Just eight years after *Whitefield*, an Illinois court did exactly that.

The Guenon in the Living Room

In contrast to the litigation heretofore discussed, *City of Rolling Meadows v. Kyle* was not a personal injury case; no one was bitten or frightened by the animal in question. At issue was interpretation of a statute.

The Kyle family of Rolling Meadows, Illinois kept a monkey named Yondi. Yondi is referred to in the case report as a “lesser spotted white nose quenon (*sic*) monkey.” The nonhuman primate in this litigation might have been (*Cercopithecus petaurista*), called in the literature by the common names of “lesser spot-nosed guenon” and “lesser white-nosed guenon” (Rowe 1996:164, Nowak 1999:573). The court opinion, however, also states that Yondi was “registered as an endangered species pursuant to the Endangered Species Act.” While there are four species of *Cercopithecus* on the federal Endangered Species List, *C. petaurista* is not one of them (50 C.F.R. 17.11). Once again, a court report leaves doubt as to exactly what species of nonhuman primate is involved. As Yondi’s owner, Audrey Kyle was charged with violating a municipal ordinance which in part declared:

No person, firm or corporation shall own or keep within the city any bees, goats, sheep, hogs, cattle, fowl, reptile or serpent, spider, or other animal normally wild, dangerous to human life or carnivorous in nature, other than domesticated house pets... The word “fowl” shall include chickens, turkeys, geese, and ducks. It is no defense to a violation of the Section that the owner or keeper of any animal or reptile which is prohibited in this Section has attempted to domesticate such animal or reptile.

To understand the *Kyle* case one must read these sentences very carefully, for the opinion rests on grammar as much as either law or zoology. Regardless of interpretation, it is clear that the ordinance was poorly drafted.

In the first phase of the litigation, the trial court found in favor of Rolling Meadows. Kyle appealed, and before a three judge appellate court she won a reversal of the lower court decision, with one judge dissenting.

Kyle argued that the phrase “or other animal normally wild, dangerous to human life or carnivorous in nature” served as a modifying phrase to the words after it: “other than domesticated house pets.” In support of this interpretation, Kyle observed that domestic cats and dogs are carnivorous, so if the phrase “other than domesticated house pets” was not included in the statute, even dogs and cats would not be allowed in Rolling Meadows.

This is a shaky foundation to build upon once the structure of the ordinance is grasped. Kyle emphasized the words after “or other animal normally wild, dangerous to human life or carnivorous in nature,” but it is more enlightening to look at the faunal enumeration appearing *before* this contested phrase. Several of the animals listed prior to the words “or other animal normally wild, dangerous to human life or carnivorous in nature” are nothing of the sort. If one writes: “No one may own or keep sheep, chickens, or other animals dangerous to humans,” the phrasing suggests that sheep and chickens are included in the set of hazardous animals. Accordingly, such a statement is better expressed: “No one may own or keep sheep, chickens, or *any* animal dangerous to humans.” Use of “any” instead of “other” makes it clear that sheep and chickens, while



The guenon in the living room, wild or domestic? You might be surprised to learn how courts have ruled in the past.

prohibited, are not a menace to human safety.

By using "other" instead of "any," the Rolling Meadows ordinance created a legal and zoological *non sequitur*, the result being that inferences may be made that are inconsistent with the overall purpose of the law. While Kyle focused on the words "carnivorous" which dogs and cats both are, and "dangerous" which dogs may be, a more plausible reading would focus on the three words "animal normally wild" and conclude that this phrase expressly *excluded* fully domesticated dogs and cats as banned animals, but did not *include* spot-nosed guenons as allowable animals.

Inexplicably, the appellate court ruled against Rolling Meadows, thus endorsing a statutory interpretation that made a guenon into a household pet. In coming to such a conclusion, the opinion discussed the status of dogs and cats, plus other small animals one might commonly keep in the home:

We believe that the drafters of (this) ordinance intended the phrase "other than domesticated house pets" to modify the entire preceding phrase "or other animal normally wild, dangerous to human life or carnivorous in nature." Were we to follow the city's argument that "domestic house pets" modifies nothing and refers only to dogs and cats, (the) ordinance would prohibit residents from keeping all other animals normally wild, dangerous to human life or carnivorous in nature, including such commonly kept house pets as birds, gerbils, hamsters, mice, rabbits, guinea pigs, tropical fish and turtles.

This interpretation of the ordinance is strikingly wrong, as can readily be seen by the court's guinea pig example. The opinion maintains that under the city's interpretation of the ordinance, pet guinea pigs would be forbidden. But how could this be when these small rodents meet *none* of the ordinance's three criteria of being wild, dangerous to humans, or carnivorous? Guinea pigs are not dangerous to human life unless one is bitten by a diseased specimen--but that could be said about any animal; indeed, pet primates potentially are particularly hazardous in this regard. Nor are guinea pigs carnivorous in nature, and since they have been domesticated for at least 3000 years one would not say they are "normally wild" (Nowak 1999:1669). By bringing guinea pigs into the discussion, the Kyle court repeated the error of *Candler v. Smith* of considering monkeys domesticated by way of an unwarranted comparison to other animals. The *Candler* case lumped monkeys with honeybees and deer, Kyle just as erroneously grouped a guenon and a guinea pig.

Furthermore, while the Kyle court argues that an interpretation contrary to theirs would mean a Rolling Meadows resident could not have turtles, by a strict interpretation Chelonians *are*, in fact, expressly banned by the ordinance; it clearly declares that no one shall keep any "reptile or serpent." (The redundancy in the use of "serpent" after "reptile" is another example of the slipshod drafting of the ordinance.)

To argue that the purpose of the law was to keep pet turtles out of the home, however, is to engage in a fruitless interpretation of this statute. It is unlikely that the true intention of the law was to declare chickens dangerous, pet turtles illegal, or monkeys household pets.

The Kyle court attempted to solidify its ruling through an examination of the phrase "domestic animal"—but again they missed the mark. They noted that Rolling Meadows did not present evidence in the trial court as to how the city construed the term *domesticated*. In light of these omissions, the Kyle court asserted that it would adopt the common usage of the word. The opinion declares:

Where the word domestic or domesticated is descriptive of the word animals, these terms connote an animal wild by nature which has been so reclaimed as to become tame, under the dominion and control of its owner, associated with family life or accustomed to living in or near the habitations of man.

Since Yondi the guenon was a family pet, obviously at the very least associated with family life and living in a Rolling Meadows habitation, the court ruled that this monkey was a domesticated house pet where the ordinance was concerned, just as surely as if it had been a dog or cat.

There are troubling aspects of this assertion. First, although all the cases considered in this paper were decided before *Rolling Meadows v. Kyle*, not one of them—or any other case involving nonhuman primates—was cited in the opinion. In support of its definition of domestic animals the court referred to various legal digests and dictionaries, but only to one case—*Commonwealth v. Flynn*, a 1934 Massachusetts decision. In *Flynn*, it was ruled that the words “any domesticated animal” in a statute included dogs, a conclusion with little relevance to the *Kyle* case, as the question was not if dogs were not domesticated house pets, but if monkeys were. In effect, the *Kyle* court made not even a cursory effort to place the litigation before them into the framework fashioned by previous decisions addressing the legal status of nonhuman primates.

Furthermore, whatever definition is adopted for domestic or domesticated, it does not necessarily follow that a domesticated *animal* is the same as a domesticated *house pet*. Illinois statutory law specifies that fox, mink, marten, muskrat and other “fur bearing animals” are deemed domestic animals as long as they are “raised in captivity for breeding or other useful purposes” (510 Ill. Comp. Stat. 60/2). If an Illinois zoological park participates in a captive conservation program for tigers, one could argue that since tigers bear fur and since conservation is a “useful purpose,” these particular big cats are domestic animals under Illinois law—but should it follow from this that a tiger is also a domestic house pet?

Finally, while there is no argument that dogs can be domestic house pets, courts have typically ruled that even its closest cousins—coyotes, wolves, and other members of the genus *Canis*—are *not* considered domesticated (e.g. *Jackson v. Baker*, *Collins v. Otto*, *Grover v. City of Manhattan*, *State v. Mierz*). *Jackson* and *Grover* involved zoo animals; if a wolf, despite its close kinship to the dog, is not considered domesticated even when kept at a zoo, it requires a huge leap of faith to declare that a spot-nosed guenon, an animal with no close cousins in service to man, can be domesticated by virtue of its being kept in the parlor.

In interpreting a poorly written law such as the Rolling Meadows ordinance, courts have an obligation to construe the statute as it obviously was intended to be seen under the illumination of common sense. In its *Kyle* opinion, the court itself summed up the requirements of interpretation:

The court must... choose a construction which gives the statute a clear and logical meaning rather than a meaning which renders it illogical, useless, or unreasonable.

Committing itself to such a standard, it is remarkable that the court supported a counter-intuitive view of the Rolling Meadows law that to the zoologist *does* seem illogical, useless, and unreasonable.

In both tort and criminal law, a guiding principle is that one is held to the “reasonable man” standard, where one is obligated to act in a manner that does not cause harmful acts a person of normal prudence and intelligence would have foreseen (Holmes 1963:47, 117). To illuminate the Rolling Meadows ordinance in a logical fashion, the *Kyle* justices would have perhaps done better to use what might be called the “reasonable mother of a ten year old boy” standard. The judges’ concern that construing the statute as the city advocated would lead to a ban of “birds, gerbils, hamsters, mice, rabbits, guinea pigs, tropical fish and turtles” could then be rebutted with the reply that a typical mother faced with a pre-teen boy’s pleas for a pet budgie, hamster, or guppy would be far more likely to acquiesce to her son’s request than would a similar mother dealing with a son asking for a spot-nosed guenon or other fairly large primate.

Two final aspects of *City of Rolling Meadows v. Kyle* deserve mention. First, the decision was not unanimous; one of the three judges wrote a brief dissent. It did not consider points raised here; the

dissent simply made the sensible argument that the statute specifically declared that one could not argue as a defense to a violation of the law that he had attempted to domesticate an "animal normally wild," and nonhuman primates clearly were just such creatures.

Second, discussing the diligent care the Kyle's gave their guenon, the court mentioned that:

(Yondi) receives the same inoculations and vaccinations as a child, including tuberculosis, polio, diphtheria (sic) and booster shots.

One could again use this as evidence of the dissimilarity of a monkey to the hamsters, guinea pigs, and tropical fish the court mused over, since pet owners do *not* take a hamster or a guppy to the veterinarian for shots. More significantly, this is the *only* mention in any of the cases discussed in this article where there is a specific acknowledgment of the special hazard presented by the possibility of disease transmission from nonhuman primate to human and vice versa.

Conclusion

With the exception of *Rolling Meadows v. Kyle*, the cases considered here were all liability cases. Such litigation is uncommon. Only cases in which one of the parties makes an appeal are reported in legal literature; there appear to have been just 16 tort cases in the United States between 1913 and 1996 concerning injury caused by a monkey or ape.

The limited number of cases of this type casts doubt on whether the adjudicated notion of "domestic" monkeys is well settled by the common law pattern of legal reasoning (Levi 1949:2). When there are a great number of similar cases, a legal principle builds a stronger foundation than occurs when cases embrace points seldom addressed by the courts. Since disputes over whether a monkey is a domestic or a wild animal do not arise often in the legal world, courts have had scant opportunity to examine this doctrine critically. Even when litigation does involve a nonhuman primate—or any animal—legal principles play a greater role than does science. As this survey has shown, however, the existing cases show a disturbing tendency for the common law to treat monkeys as actually or potentially domestic animals.

Adverse implications of this doctrine have not necessarily been minimized by modern statutory law. For instance, since a portion of the federal Animal Welfare Act (AWA) addresses care of captive primates (9 C.F.R. §3.80-92) one might think that in a case involving a pet monkey, courts would take notice of such regulations to assess whether the interests of the animal were being served by its owner, as a contrary determination would weigh against the owner in the litigation. Yet none of the discussed opinions decided since the AWA took effect—*Pate v. Yeager*, *Whitefield v. Stewart*, or *City of Rolling Meadows v. Kyle*—mention the existence of federal law governing the well-being of primates under human care. This might seem inexplicable, since the AWA specifically states that one of its purposes is "to insure that animals intended... for use as pets are provided humane care and treatment" (7 U.S.C. §2131). However, in passing the AWA, Congress used its power under Article 1, section 8 of the United States Constitution, giving it authority: "To regulate Commerce... among the several States." Accordingly, AWA mandates apply only to those involved in the sale of animals as pets, not to the pet owners themselves, thus in *Pate*, *Whitefield*, and *Kyle*, AWA standards were not relevant.

Since the Animal Welfare Act and other laws have not weakened the common law notion of nonhuman primates as domesticated animals, this illogical and archaic doctrine still has life in the United States. For the benefit of primates human and nonhuman, courts of law should see that it is buried, any time litigation provides the opportunity. Monkeys are not domestic animals; they certainly are not household pets.

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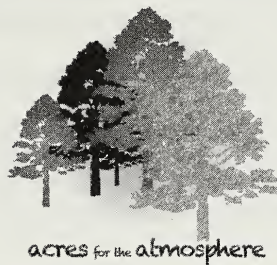
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An Interview with Marissa Krouse

Chairperson of Acres for the Atmosphere

By Heather Kalka and Shane Good



AKF: What exactly is Acres for the Atmosphere?

Krouse: Acres for the Atmosphere is a roll-up-your-sleeves tree-planting and educational effort involving AAZK Chapters, zoos throughout North America, and Polar Bears International's (PBI) Arctic Ambassador Centers and Leadership Camp graduates. It was started by graduates of the 2009 PBI Zoo Keeper Leadership Camp. With the continued support of PBI and AAZK, we intend to offset the effects of climate change and help save not only the polar bear but all species that would soon follow. Working together, we create carbon sinks by organizing planting events within our communities as well as carrying out energy conservation campaigns to help reduce carbon emissions. Our community events create a group identity that fosters a sense of responsibility for the local environment, and in turn, promotes respect for the global environment as a whole.

AKF: Explain the difference between Acres for the Atmosphere and Trees for You and Me.

Krouse: Acres for the Atmosphere and Trees for You and Me are both initiatives that are supported by AAZK and PBI. Under the AFTA umbrella, the two initiatives work together on a collaborative effort to "Buy it or Do it!", reducing carbon emissions through community action. Trees for You and Me is an AAZK Chapter Challenge to raise funds to help plant the Polar Bear Forest in Wisconsin. The vision for this Chapter Challenge came from two professional AAZK members that also participate in PBI's Field Ambassador Program. For every \$1 raised the Wisconsin DNR will plant three trees in the Polar Bear Forest... (Buy it!). This year the Chapter Challenge runs from September 1, 2011 to March 1, 2012. AFTA is a more "hands on" approach to leading your community in carbon reduction... (Do it!). It was created by graduates of the 2009 PBI-AAZK Keeper Leadership Camp and gains further momentum from other Leadership Camp grads, local AAZK Chapters, and PBI Arctic Ambassador Centers. Our representatives organize local plantings and carry out energy efficiency campaigns to not only raise awareness about climate change and its effect on the earth we all share but to effect change within our communities as well. Planting trees in our communities does not compare to the carbon sequestration of large tracts of trees like the Polar Bear Forest. What it does is foster relationships and collaboration within communities to build respect for the environment and public support for the policies that can prompt even greater carbon reductions!

You can learn more about starting your own chapter's fundraiser for Trees for You and Me and/or effecting change through Acres for the Atmosphere at: aazk.org/aazk-and-polar-bears-international/

AKF: What are the future goals of Acres for the Atmosphere?

Krouse: We really hope to have more representatives doing energy efficiency campaigns this year and the years to follow. Since we take a "closing the loop" approach to stabilizing our climate it is just as important to reduce our carbon output as it is to soak up the carbon through tree plantings.

AKF: How can the average person or AAZK Chapter get involved?

Krouse: Anyone can choose to represent AFTA by contacting myself or Heather Kalka (marissa.krouse@aazk.org, or heather.kalka@aazk.org) and organizing a community planting and/or energy efficiency campaign. We have an electronic scrapbook for brainstorming, AFTA brochures, templates for signage at your event, and a planting checklist to get you started!

AKF: What are some of AFTA's greatest accomplishments to date?

Krouse: AFTA just started its third year and we are continuing to gain momentum. Over the past two years we have worked with over 40 collaborating zoos, AAZK Chapters, and local business and conservation organizations. We have organized plantings in 26 communities and carried out energy efficiency campaigns in three communities. You can find more details about specific projects in your area via our electronic scrapbook.

AKF: What does AFTA hope to have accomplished in the next five years?

Krouse: In truth, AFTA continues to grow and gain momentum with every passing moment. We strive to learn and develop within each situation as it presents itself so that we can ensure we are being effective and achieving our goals. In five years' time, I feel that that will not have changed. However, I am certain that we will have expanded the number of representatives and projects that are being completed, as well as the number of organizations working alongside our efforts, so that we can all achieve a healthier tomorrow.

AKF: What is the greatest challenge for AFTA?

Krouse: I would say that we have two great challenges; first, is for each representative to always engage their communities in actions as opposed to just climate change awareness; second, is communication within the group. We have to be creative and I think that's where it becomes even more important to report back to the group so we can brainstorm with each other and evaluate what's working and what has the most impact. We have modified the way we keep in touch in several ways. Currently, we utilize group e-mails, two-three conference calls per year, the *AKF*, and an Arctic Ambassador Collaboration space on Facebook®. We also report to AAZK's Conservation Committee and PBI twice per year.

AKF: What kind of trees do you plant and are they from a sustainable resource?

Krouse: We encourage each representative or AAZK Chapter to collaborate with their local arborist or horticulture professional when planning their planting event. They are an invaluable resource when looking for the most appropriate trees/foliage, especially when considering the environment, soil condition, watering needs, placement, invasive species, etc. Ensuring that they are from a sustainable resource is the responsibility of the representative/Chapter. Our Arbor Supervisor from the NC Zoo presented a paper about our local AFTA efforts at last year's 2011 Association of Zoological Horticulture (AZH) conference in an effort to further facilitate this collaboration between keeper and horticulture staff.

AKF: How is AFTA affiliated with AAZK and PBI?

Krouse: AAZK and PBI work together as Conservation Partners and Acres for the Atmosphere is one of two other programs that are supported by both organizations; Keeper Leadership Camp and Trees for You and Me. Fundraising for Acres for the Atmosphere events can be done within your local Chapter. However, our representatives often find other means of raising funds for

their events through in-kind donations, grants, their PBI Arctic Ambassador Centers, and other local collaborative organizations. We find support for “infrastructure” within both AAZK and PBI. AFTA representatives have conducted strategic planning as well as leadership workshops with the help from AAZK and PBI, published updates and keeper profiles via the *AKF*, and raised awareness and showcased accomplishments on PBI’s website (polarbearsinternational.org/programs/acres-atmosphere-model-communities).

AKF: What is the scope of AFTA, what regions or areas are involved?

Krouse: Thinking globally and acting locally we have representatives working with their communities across the U.S and Canada. This year, in the U.S, we have representatives in the following states: Florida, North Carolina, Kentucky, Indiana, Ohio, Michigan, Pennsylvania, Illinois, Maryland, Rhode Island, New York, Minnesota, Wisconsin, Colorado, Missouri, Oregon, California, and Alaska. Our efforts in Canada are primarily taking place in the Toronto area.

AKF: What do you wish you had thought of for your first planting or presentation that you now know?

Krouse: Well, here in NC we have several different types of soil depending on the region. Our first planting was in a region that has very hard, dry clay-type soil. We dug all of our holes by hand for trees that ranged up to 10 ft. tall....needless to say, it was very difficult. It may have also been the hottest day in May EVER! But, we had plenty of water and some awesome volunteers from our local NC AAZK Chapter, the NC Zoo and Trees NC. We ended up getting about 75% of our trees in the ground before we had to call it a day. At our next planting, in the same region, the Mayor offered to use an auger to pre-dig the holes for us. We had each tree sitting by its pre-dug hole when our 70 community volunteers showed up that day.

AKF: What is your favorite event so far and why?



Marissa Krouse, Chairperson of Acres for the Atmosphere and Animal Keeper at North Carolina Zoo.
Photo by Jeff Owen, North Carolina Zoo.

Krouse: Each of our representatives have had such unique events that it is hard to pick just one favorite. I am going to pick one of the more recent events. I have to mention the “Going away party” that we had for one of the North Carolina Zoo’s (NC Zoo) polar bears, Willie. Over the past two years at the NC Zoo we have had several Moonlight Polar Bear Walks in which visitors paid a fee to come to the zoo after hours and take a moonlit walk to the polar bear exhibit. Here they viewed Willie under a full moon with special enrichment and keepers talking at the overlook and underwater viewing areas. These events were very interactive and you could literally feel the connection our visitors formed with Willie. Each of these events always came to a close with the group tossing out their bad habits (like using incandescent light bulbs) and committing to new, more energy-efficient behaviors. Literally, we tossed a paper mache incandescent light bulb into the exhibit for Willie, and we gave each family their own energy efficiency kit including a water heater blanket, pipe insulators, aerators, and CFLs, all donated by a local energy company. With each of these kits reducing a household’s energy use by 940 kwh/year, this group of committed visitors will save 100,030 lbs. CO₂ from the atmosphere yearly (epa.gov/cleanenergy/energy-resources/calculator). The NC Zoo is expanding its polar bear exhibit and as a result, Willie was transferred to the Milwaukee County Zoo. We had another special event serving as the community’s opportunity to wish him a safe farewell. We planted a tree in Willie’s name to symbolize our commitment to AFTA and being a PBI Arctic Ambassador Center while the polar bears are absent from the NC Zoo. It was here that we realized the impact that Willie has had on this community as visitors continued to thank us for inviting them to this event that they paid to be a part of.

AKF: Acres for the Atmosphere is a product of the first AAZK/PBI Leadership Camp. Tell us a little about that experience. What message do you want to share with the AAZK Membership from Leadership Camp?

Krouse: I had the opportunity to attend Keeper Leadership Camp in 2009 and it changed my life forever. I can honestly say that since the moment I looked into the eyes of the wild polar bear I was never the same again. My experiences with Keeper Leadership Camp have given me the confidence, the information, and the skills necessary to fulfill my newly refined role as a keeper and a steward. Interestingly, I also find that these experiences have, in a sense, reinvigorated my work with my local Chapter, AAZK National, my job at the NC Zoo, and other local conservation organizations. It has truly been an honor to be a part of facilitating that experience for others and making new friends and professional peers for life. When I think back, it is weird to remember a time when the AAZK-PBI family was not a part of my life...



Two polar bears wrestling on the shore of Hudson Bay, location of the AAZK/PBI Leadership Camp.
Photo by Shane Good

Research in Practice

Becky Richendollar, Senior Editor

Transportation of Giant Pandas

One of the most difficult aspects of zoo keeping and zoo management in general is the exchanging of animals between institutions for breeding, social, and management reasons. Keepers who have become attached to the animals in their care often find it difficult to get behind AZA transfer recommendations. In addition, keepers and zoo management are concerned about the stress that transportation and relocation can cause for the animals.

This study tracks four Giant Pandas (*Ailuropoda melanoleuca*) as they are transported and relocated from China to the United States. The study tracks behavioral changes as well as examines cortisol levels in the animals prior to, during, and after transport.

The subjects were two male-female pairs. One pair, Lun Lun and Yang Yang, were transported to Zoo Atlanta in 1999 and the other pair, Mei Xiang and Tian Tian, were transported to the National Zoological Park in 2000.

Total transport time for Lun Lun and Yang Yang was 40 hours, and total transport time for Mei Xiang and Tian Tian was 24 hours. Data were collected in the 30-day period prior to shipping. For Lun Lun and Yang Yang, 21 hours of data were collected in the 30-day period prior to shipping, and 38 hours of data were collected in the 30 days after they arrived at Zoo Atlanta. For Mei Xiang and Tian Tian, 42 hours of behavioral data were collected both in the 30 days prior to transport and in the 30 days after they arrived at the National Zoo. Behaviors recorded during this time were: active, inactive, social, stereotypic, and feed. In addition, urine samples were taken during transport and post-transport to assess cortisol levels.

In both pairs, the females spent more time being active after they arrived at their new zoos and the males spent less time being active in their new enclosures. Only Lun Lun and Tian Tian showed signs of engaging in stereotypical behavior, and in both cases this behavior decreased after transport.

The findings regarding cortisol levels were not surprising. Urine was collected from 3 of the 4 animals during shipping. For two of the pandas, the cortisol value was significantly higher during transportation than during the rest of the collection period. For the third animal, the cortisol value was high on the day following transportation, and continued to decline over the next 30 days.

Overall, the data suggest that these four animals did not experience severe or long lasting stress effects from the transportation from China to the U.S. The researchers acknowledge that it is not a good idea to make generalizations based on the data for four animals, but also suggest that this study is a good starting point for understanding the potential effects of transport on zoo animals.



Giant Panda Mei Xiang at Smithsonian's National Zoo. Photo Credit: Smithsonian's National Zoo

Practical Applications for Zookeepers:

- Transporting animals to other facilities can temporarily increase stress.
- An increase in stress behaviors or stress hormones does not always lead to a permanent change in the animal.
- Moving from one zoo to another may serve as a good form of enrichment and may decrease stereotypical behaviors in some animals.

To view the complete article:

Snyder, R. J., Perdue, B.M., Powell, D.M., Forthman, D.L., Bloomsmith, M.A., and Maple, T.L. (2012), Behavioral and hormonal consequences of transporting giant pandas from China to the United States. *Journal of Applied Animal Welfare Science*, 15:1, 1-20.

Optimizing Environmental Enrichment for Fennec Fox

Keepers use enrichment every day and understand the need for and the importance of enriching animals. This study takes enrichment one step further, and asks if a variable schedule of enrichment can further enhance an animal's life, as well as increase zoo visitor interest in the animal's behavior.

The subjects of the study are 1.1 Fennec Fox (*Vulpes zerda*) at the Brookfield Zoo. The researchers used a belt-type 12-hour automatic fish feeder outfitted with a manifold that was affixed to the opening of the feeder. The manifold dispersed food through one of three plastic tubes, each of which hung over a portion of the Fennec Fox exhibit. The belt of the feeder was



Is variety the spice of life for the fennec fox (*Vulpes zerda*)?

marked to divide it into sections. This enabled the keepers to precisely load the food on the belt to test their hypothesis. They hypothesized that the animals would have a higher motivation to explore when the probability of receiving food at a given time and place varied. In other words, if food always arrived at a certain time and place (100% certainty), or never arrived at a certain time and place (0% certainty), the animals would be less likely to forage than if the food sometimes arrived at a certain time and place (25%, 50%, and 75% certainty).

The Fennec Fox diet at Brookfield consists of vegetables, insects, dry kibble, and moist canned animal food. For the experiment, the researchers mixed all but the insects into a dough-like paste which they then fashioned into 42 identical-sized balls. Keepers then loaded the belt feeder with the food balls in a pre-determined manner.

Simple time-budget activities (active, inactive, forage, and vigilant) were monitored in two 20-minute sessions each weekday. In addition, the researchers were interested in the public's response to the enrichment. Therefore, they measured the amount of time that guests seemed to be paying attention to the exhibit, as well as counting the number of people at the exhibit during the 20-minute sessions. Baseline data were taken for one month prior to the beginning of the experiment.

The results showed that using the feeder in this manner did make the animals' time budgets more

diverse. Specifically, the amount of time spent inactive and the amount of time spent being vigilant varied across treatments. The study does show that, “intermediate levels of certainty of reward are more stimulating than no certainty or complete certainty.” In addition, during the use of the feeder, zoo visitors remained at the exhibit longer. Although zoo visitor interest differed with each treatment, the amount of time the visitors stayed in front of the exhibit did not drop below the baseline data.

Many researchers have begun to point to unpredictability as being an enriching factor in the lives of captive animals. This is one study that shows that enrichment can be more stimulating for zoo animals when it is varied and neither completely predictable nor completely random.

Practical Applications for Keepers:

- Active animals are more interesting to zoo visitors. Using an automatic belt feeder or another enrichment device to increase animal activity will please zoo visitors and management alike.
- As an inexpensive alternative to the belt feeder, try to vary your animals’ feeding routine. An uncertain environment is more stimulating. If you feed your animal twice a day, try to vary your routine by sometimes dividing the diet 50/50, sometimes 25/75, and sometimes 75/25.
- Enrichment devices that don’t always produce the desired result can be stimulating for the animal. So if the puzzle feeder that you always put raisins in one day has nothing in it, this will ultimately pique the interest of the animal even more.

To View the Complete Article:

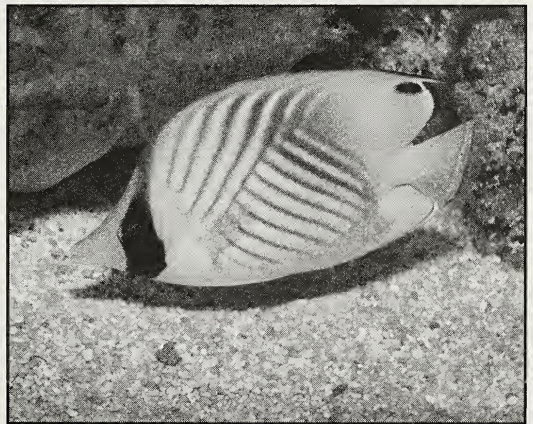
Watters, J.V., Miller, J.T., and Sullivan T. J. (2011), Note on optimizing environmental enrichment: A study of fennec fox and zoo guests. *Zoo Biology* 30: 647-654.

The Effects of Substrate on Foraging Behavior in Aquarium Fish

Animal welfare concerns usually focus on the living conditions of birds and mammals. Fish are often overlooked and in many cases are assumed incapable of feeling boredom or pain. The author of this study stresses that without proof that fish are incapable of feeling pain, we should assume they are sentient and treat them as such.

In this experiment, substrate preference in goldfish was examined. Goldfish are “benthic fish that root for food in the benthos close to vegetation in shallow water”. As they forage, goldfish take pieces of substrate into their mouths, eat the microscopic prey on the substrate, and then spit the substrate back out.

There were three phases of this experiment which involved 22 goldfish (*Carassius auratus*). During each phase, data were collected during two 30-minute sessions, one in the morning and one in the afternoon. The length of time of each foraging bout was recorded.



Auriga butterflyfish (*Chaetodon auriga*) - Research indicates that it is important to provide fish with complex, naturalistic environments with multiple sizes of substrates to meet their animal welfare needs.

In phase one of the experiment, five tanks were set up, four with substrate and one with nothing but the plastic grid on the bottom of the tank. The four substrates were very coarse sand, fine gravel, pebbles, and cobbles. The results showed that the fish foraged more often and for longer periods of time in the tanks with the smaller substrates.

In experiment two, three tanks were set up and divided down the middle. One tank had coarse sand on one side and fine gravel on the other; the next tank had fine gravel on one side and pebbles on the other; and the third tank had pebbles on one side and cobbles on the other. When given these choices, the fish foraged longer and more often over the smaller substrate when the choice was between fine gravel and pebbles and pebbles and cobbles. There was not a significant difference in forage time in the tank with coarse sand and fine gravel. In all cases, the fish had been recently fed, so the fish were not foraging to meet nutritional needs.

Research has shown that foraging is a necessary behavior in some species, even when their nutritional needs are completely met in captive situations. This paper gave the example of pigs needing to root even after being well-fed. In order to test this theory with the goldfish, in experiment three, the researchers offered two choices to the fish: half the tank was covered with coarse sand with a small amount of food in it, and half was covered with cobbles with a large amount of food in it. It was found that the fish spent a significantly longer amount of time foraging and foraged more often in the smaller substrate with less food. Thus, the presence of a preferred substrate influenced foraging behavior more than the availability of food.

Practical Applications for Keepers:

- As more research is being done, it is becoming clear that fish are sentient and need to live in enriched environments.
- The most enriching situation for a captive animal is one in which they can make choices. Giving fish options about substrate size can be a simple way to improve animal welfare.
- Foraging behavior in animals may fulfill behavioral needs and not be based solely on nutritional needs. Therefore, giving animals the option to forage in a natural manner can be very important for their welfare.
- This study also points out that while the fish didn't forage as much in the larger pebbles, they still manipulated the pebbles, so even if you are unable to provide the fish in your collection with the perfect substrate, any substrate can be enriching.
- This experiment points, once again, to how important it is to pay attention to natural history. The researchers point out that wild goldfish "probably evolved to forage over silt", so the larger particles don't fit as comfortably in their mouths as they are "sifting" for their prey. Knowing where your animal lives and how it obtains food in the wild can give you great ideas for enrichment.

To View the Complete Article:

Smith, A., and Gray, H. (2011), Goldfish in a tank: The effect of substrate on foraging behavior in aquarium fish. *Animal Welfare* 20: 311-319.

The AAZK Behavioral Husbandry Committee Presents

Training Tales...



Where you can share your training experiences!

*Training Tales Editors – Jay Pratte, Henry Doorly Zoo, and
Kim Kezer, Zoo New England*

Ideas to Help New Training Programs (Part 1)

By

*Jay Pratte, Animal Training Coordinator, Omaha's Henry Doorly Zoo,
AAZK Behavioral Husbandry Committee Member*

With the advent of a new year, we wanted to address questions that tend to be fairly common amongst new keepers, new AAZK members and new trainers. Many of us have been around for a while, and we may forget that it is not always easy to access basic training resources. The focus is on the “big goals” like injection or blood draw training, but people might not know how to get there. This basic outline was modified from a document presented to delegates at the 2011 Advancing Bear Care conference hosted by the Bear Care Group. It has not been previously published, but in its original form is available at bearcaregroup.org.

Consider that while the general guidelines were designed with the various species of bears in mind, the methods and behaviors are equally applicable to any training program and a variety of species. Even if you are training other animals that do not have paws to present, the techniques described may still help plan your goals and provide ideas on how to reach them.



Polar bear at Omaha Zoo. Photo: Author

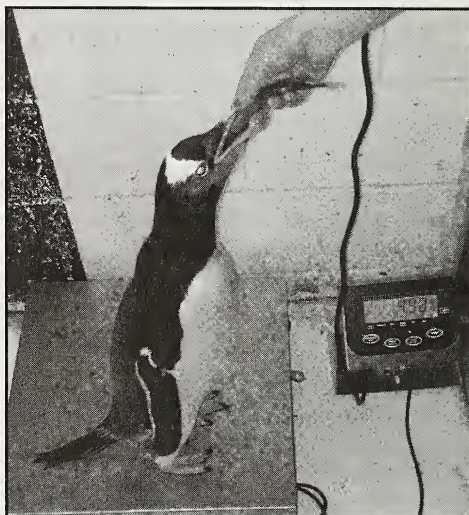
Natural History and Setting Goals

The most important factors to consider before training an animal are: Why do I want to do this? What is the animal physically capable of? How do I safely reach my goals? The first thing to research is natural history of your species. Know the animal's physiology, how it moves, what might be comfortable physical positions for training objectives, and what specific safety issues for both trainer and animal might be applicable. Understand its diet, discerning preferred natural food items to use as training rewards. Learn how the animal thinks; different species exhibit specific approaches to learning and responding. For example, training a very goal-oriented, focused polar bear (*Ursus maritimus*) is completely different from training a sun bear (*Ursus malayanus*) with a wider attention span and a creative foraging existence. A bird is not just a bird: training a harpy eagle

(*Harpia harpyja*) is going to be vastly different from a cockatoo. Factor these natural history parameters into how you plan your training goals.

It is important to set specific goals, and have realistic expectations for timelines and accomplishing these goals. Are you training an animal for: public education demonstrations, a specific medical concern, or to improve daily husbandry? Regardless, have a plan in place, including behavioral goals, rewards, cues and records. Progress will vary between behaviors and between animals. Do not try to rush training, but instead respond to the animal's progress and behavior and set goals for individual animals accordingly.

Good communication is vital when planning your training program and setting goals. Discuss your plans with coworkers and managers to ensure everyone is on the same page and aware of your activities. Your coworkers may need to be flexible in their routines to help you achieve your goals; altering cleaning times, changing up the feeding schedule, backing you up for shifting or the training itself. Your program's success will likely hinge on their participation; communicate your goals, methods, and your successes so the team knows where things stand. Be sure to ask for opinions and assistance from coworkers to increase "buy-in." Once you are at the stage where you are teaching medical behaviors, solicit input from veterinary staff about their needs and expectations for things like positioning, accessibility and duration. Knowing what these needs are in advance minimizes finding out later and having to completely retrain a behavior with different parameters.



Penguin scale training. Photo: Author

Creating a "Bridge" with a Whistle or a Clicker

The most essential element in beginning a training program with an animal is teaching it the parameters of learning. The animal does not understand what we are asking for, so we need a method of teaching it how to reach a goal. This is the inherent mechanism to positive-reinforcement operant conditioning. The first step in this simple process is earning the animal's trust by associating a *primary reinforcer* with you, the trainer. With animals, the primary reinforcer is almost always (but does not have to be) food. A primary reinforcer is something that the animal wants, so receiving it will reward, or "reinforce" the training goal that you are trying to accomplish. The best way to build a training relationship based on trust is to identify the animal's favorite food items and use those for training sessions. That way the animal is rewarded with something it values for working with you. If its favorite foods are biscuits and bananas, use those. If it likes apples and carrots, use those. The animal has to *want* the reinforcer in order to work for it. Initially, you want to directly present/feed the animal the reinforcer. This way the animal learns to take food from you (safely), and also learns that your presence is a good thing and signals the chance to receive something of value.

Once you are able to safely feed the animal, choose your "bridge". Your bridge should either be a whistle or a clicker, whichever you personally feel the most comfortable using. A whistle or clicker is best because it is a concise, sharp noise that indicates the exact moment the animal did what you were asking, thus allowing for more effective communication of information. The "bridge" (conditioned reinforcer: the clicker or whistle) communicates to the animal that it has performed correctly, and often signals that additional reinforcement is on the way (food). It "bridges" the gap between the time the correct response is given and the time the primary reinforcer is delivered. It acts itself as a secondary reinforcer, meaning that while it does not have the *primary* value of food, the animal learns

that it means “good”, and so the desired behavior is reinforced. Once you are comfortable that the animal will take food from you, and that your bridge is recognized as a reward, you can proceed to training a simple behavior. (Binney & Kezer, 2010)

Always remember when you are first teaching any new behaviour to an animal, that food should be used as a reward along with the clicker/whistle. The clicker/whistle is a useful tool, but only when the animal has been taught to associate the sound with a reward. An animal needs its primary reward (food, attention, etc.) to help it learn the behaviour. The clicker/whistle can be used on its own later, when the animal reliably knows what to do when asked for a particular behaviour. When it knows what to do every time you ask for a particular behaviour, then you can start using the clicker by itself once in a while, instead of pairing it with food every time (intermittent reinforcement). If the animal gets confused, back up in the training, and start rewarding each correct response. Regression in behaviors (animals not responding as well as normal) is going to occur; don't be afraid to back up a few steps to remind and encourage the animal.

We will continue this article in a future issue of the *AKF*. Below are a few references that may help a novice trainer set goals and a plan, or provide more experienced trainers a few helpful reminder tips.

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By Greg McKinney

Institute of Medicine Releases Report on Chimpanzees in Research

Before Haley Barbour of Mississippi made news with his outgoing pardons, Bill Richardson, in his last week as governor of New Mexico in December 2010, received word from the National Institute of Health that his own pardon request would be honored, at least temporarily. Governor Richardson, along with Jane Goodall, the Physicians Committee for Responsible Medicine, actor Gene Hackman and others had stepped up to protest the transfer of nearly 200 chimpanzees to an active research facility in Texas. The chimps had been living, research-free, since 2001 at the Alamogordo Primate Facility on Holloman Air Force Base. The concerns expressed were enough to help convince the National Institute of Health to defer the move and commission a study by the National Resource Council to review the need for, and policies of, chimpanzees in research.

One year later, the National Institute of Health has stated that they will accept recommendations from the Institute of Medicine report, "Chimpanzees in Biomedical and Behavioral Research: Accessing the Necessity" and will not be issuing any new research awards involving chimpanzees.

According to the Physicians Committee for Responsible Medicine (PCRM), the report further stresses the need for Congress to pass the Great Ape Protection and Cost Savings Act (H.R. 1513 / S. 810), a bill introduced in April 2011 which now has at least 150 co-sponsors. This bill would end the allowance of invasive research on chimpanzees (*Pan troglodytes*), bonobos (*Pan paniscus*), gorillas (*Gorilla gorilla* / *G. beringei*), orangutans (*Pongo pygmaeus* / *P. abelii*) and, though not a hominid, gibbons (Family *Hylobatidae*). Invasive research is defined as research that "may cause death, injury, pain, distress, fear, or trauma". The bill clearly bears no relevance to captive zoo populations. Exclusions and exemptions allow for veterinary care, observation studies and temporary separation from established social groupings so there should be no need to continue allowing for great apes to be used in research and pedantically hold up this legislation over semantics or wording.

It is not clear what will be next for the federally-owned Alamogordo apes. Following the Institute of Medicine's report, the NIH issued a statement, saying "ongoing research involving NIH-owned or NIH-supported chimpanzees will be reviewed on a project-by-project basis by the NIH working group to assess whether it meets the IOM principles and criteria. Until the NIH working group has made these assessments and further policy issued, currently funded research may continue." While acknowledging that "most current use of chimpanzees for biomedical research is unnecessary" the NIH nonetheless writes "the following areas may continue to require the use of chimpanzees:



The United States is one of only two countries in the world that legally allows biomedical research on chimpanzees (*Pan troglodytes*). That may be about to change.

some ongoing research on monoclonal antibody therapies, research on comparative genomics, and non-invasive studies of social and behavioral factors that affect the development, prevention, or treatment of disease.” With regards to monoclonal antibodies, the IOM report expressed that there are new technologies available that make the chimpanzee model obsolete, but that the technology is not yet widely available.

The chimps in New Mexico were to be used in research aimed at the development of a vaccine to prevent hepatitis C. The NIH statement declares that “the committee was unable to reach consensus on the necessity of the chimpanzee for the development of prophylactic hepatitis C virus vaccine.” According to the PCRM, the leading hepatitis C researchers are using human cell-based research methods exclusively.

The United States and Gabon, in central Africa, are the only two countries that still allow the use of chimpanzees for biomedical research. The United Kingdom in 1997 banned research involving chimps. Japan did likewise, albeit, unofficially, in 2006. And in 2010, the European Union banned all great ape research. Just how does the United States, standing alone among nearly all nations of the world, allow for continued invasive experimentation using chimpanzees when according to many, including the PCRM, there is no necessity and there are viable alternatives? How is it that Careerbuilder® is able to use chimpanzees in its advertisements? Are not all great apes endangered?

The chimpanzee, unlike any other animal, has a split-listing, not by sub-species or geographical location but rather as a condition of their confinement. Captive chimpanzees are listed as threatened. Last year the US Fish and Wildlife Service launched a status review to determine if captive chimpanzees should be classified along with their wild populations as endangered. We await the results.

Sources:

Albuquerque Journal, 31 December 2010

Library of Congress Physicians Committee for Responsible Medicine, 15 December 2011

National Institutes of Health Institute of Medicine of the National Academies Courthouse News,
2 September 2011

Endangered Species Act Related Lawsuits and Intents

On 5 January 2012, the Center for Biological Diversity, Wild South and Margaret Copeland filed suit against the US Fish and Wildlife Service claiming that logging has increased in the Mississippi Noxubee Wildlife Refuge despite the fact that the resident population of red-cockaded woodpeckers (*Picoides borealis*) has declined. The red-cockaded woodpecker has been listed as endangered since the inception of the Endangered Species Act.

On 9 January 2012, the Center for Biological Diversity (CBD) along with the Save Our Springs Alliance announced their intent to sue the USFWS for not allowing the Jollyville Plateau salamander (*Eurycea tonkawae*) emergency protection under the Endangered Species Act. The salamander is not currently listed as endangered although the USFWS did add it to its list of candidates in 2007, responding to a petition from the Save Our Springs Alliance submitted in 2005. The suit is seeking immediate endangered status be established for the salamander although the USFWS has until the end of 2012 to decide on this and 756 other species according to an agreement between USFWS and the CBD established in 2011. The Jollyville Plateau salamander, discovered in 2000, lives in springs and wet caves fed by the Edwards Aquifer in central Texas. It was recently discovered that 2000 gallons of water was leaking from this aquifer daily into a construction shaft of Austin’s new water-treatment plant, WTP4. Ironically, the Austin city council relocated the site for the plant to Bullick Hollow at least partially because the initial site, Bull Creek, had a population of Jollyville Plateau salamander present downstream.

On 19 January 2012, the Center for Biological Diversity, Cascadia Wildlands and the Audubon

Society of Portland filed a notice of intent to sue the state of Oregon over logging practices in the Elliot, Tillamook and Clatsop state forests, claiming the clear-cutting is leading to the demise of the federally protected marbled murrelet (*Brachyramphus marmoratus*).

Sources:

Center for Biological Diversity, January 2012
Austin City Water

Much Needed Funding for Bats

On 16 December 2011, Congress directed the Department of the Interior to allocate 4 million dollars towards research and management of white-nose syndrome. The money is to be taken from the Interior's endangered species recovery fund. This is more money than was allotted in 2010/2011 but could prove to fall short of what is needed. On 17 January 2012, US Fish and Wildlife Service announced that the disease is spreading and has, to date, resulted in the death of between 5.7 and 6.7 million bats.

The first case of white-nose syndrome was discovered in New York in 2006. To date, there have been confirmed cases in 16 states and three Canadian provinces. *Geomyces destructans*, a species of fungus that thrives in the cold, dark, humid conditions that are typical of bat environments, is considered to be the underlying agent of white-nose syndrome. So far, six species of bats, all hibernating species, have been found to be affected.

Sources:

Center for Biological Diversity
US Fish and Wildlife Service
US Geological Survey

Snakes Banned from Interstate Transport and Importation



A recent report says that Burmese pythons (*Python molurus bivittatus*) released into the Florida Everglades may have reduced the population of medium-sized mammals in the park by 99%.

a new report published in the *Proceedings of the National Academy of Sciences* stated that there has been a decline of as much as 99% in the number of medium-sized mammals in some areas of the Florida Everglades, most likely due to the large population of non-native pythons in the park.

On 23 March 2012, a ban finalized by the US Fish and Wildlife Service, on the importation into the United States, as well as the transfer within the country, will go into effect for the following snakes: yellow anaconda (*Eunectes notaeus*), Burmese python (*Python molurus bivittatus*), and the northern (*P. sebae*) and southern African rock pythons, (*P. natalensis*). This ban is in response to the increasing economic and ecological damage directly attributed to the release or escape of these reptiles into the wild, particularly the Florida Everglades. In a related story,

Zoos will be unaffected as the USFWS has stated previously that exemptions will be granted for educational or zoological purposes. Current owners will be allowed to keep their snakes. Several herpetological groups and reptile breeders have condemned the ban as ineffectual and damaging to the economy. New England Reptile Distributors or NERD warned on their website that this ban is just an over-protectionist first step and that people should be concerned that their horse or cat might be next.

Unless additional state laws are enacted, reptile breeders will be able to continue to breed and sell these snakes within their home state, even within Florida. At the same time, as NERD has pointed out, it would be illegal for a responsible pet owner to move, with their python, from Wyoming to Alaska, states which do not appear to be likely to be at risk from an invasive snake outbreak, even, at least for the immediate future, with the effect of global warming.

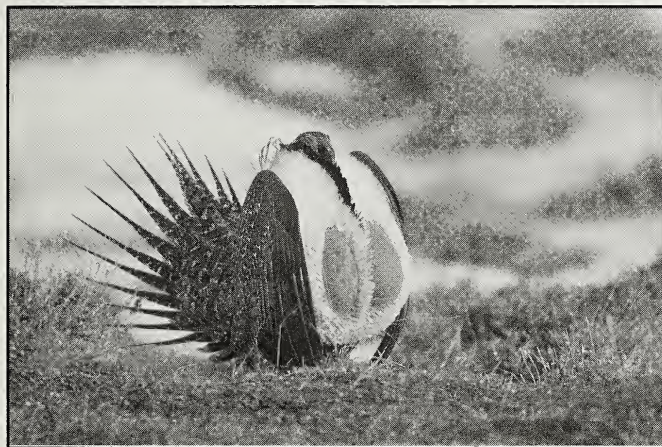
Sources:

US Fish and Wildlife Services

New England Reptile Distributors

Earthweek, 3 February 2012

Action on Climate Change



The greater sage grouse (*Centrocercus urophasianus*) has the unfortunate distinction of being on the Endangered Species Coalition's Top Ten list for species threatened by fossil fuels. Read "Action on Climate Change" to see the entire list.

press release, is not meant to prescribe regulatory actions but rather to present tools for agencies to use to help when "considering climate change implications to their ongoing wildlife and habitat management activities."

The Obama administration has released a National Fish, Wildlife and Plants Climate Adaptation Strategy which is currently viewable through the website: wildlifeadaptationstrategy.gov/. A diverse group of researchers from across the country were involved in the drafting of the strategy which will be led by the US Fish and Wildlife Service, the National Oceanic and Atmospheric Administration, the New York Division of Fish, Wildlife, & Marine Resources and the Association of Fish and Wildlife Agencies. The strategy, as described in a joint USFWS, NOAA, AFWA

The Endangered Species Coalition has released its top 10 list of US species threatened by fossil fuels: fuelingextinction.org/media/ESCTop10web.pdf. The polar bear (*Ursus maritimus*) did not make the list but is mentioned as the recipient of the Activist's Choice Award, the additional species of most concern. The listed species are threatened by many of the direct and indirect by-products of our addiction to fossil fuel such as habitat disturbance and degradation, oil spills, vessel collisions, acoustic disturbances, and climate change. The top 10 Species are: Kemp's Ridley sea turtle (*Lepidochelys kempi*), spectacled eider (*Somateria fischeri*), bowhead whale (*Balaena mysticetus*),

greater sage-grouse (*Centrocercus urophasianus*), dunes sagebrush lizard (*Sceloporus arenicolus*), Wyoming pocket gopher (*Thomomys clusius*), whooping crane (*Grus americana*), Kentucky arrow darter (*Etheostoma sagitta spilatum*), a mussel, tan riffleshell (*Epioblasma florentina walkeri*), and the wildflower Graham's penstemon (*Penstemon Grahami*) which is found exclusively on oil shale soil.

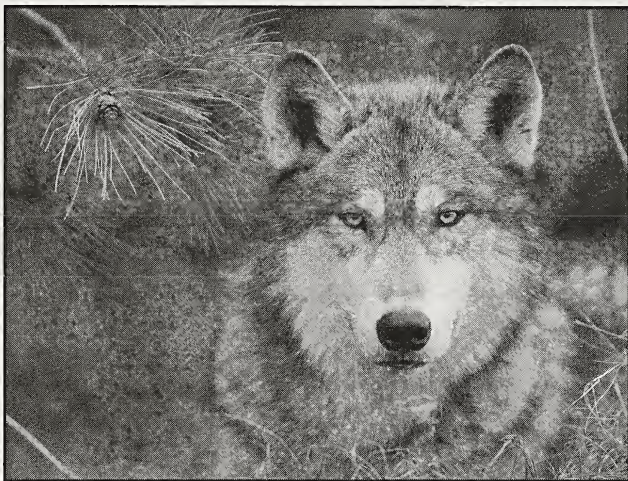
Sources:

US Fish and Wildlife Services

stopextinction.org/

Wolf in California for the First Time Since 1924

A lone male wolf (*Canis lupus*), two years-old and known as OR-7, has travelled 300 miles across Oregon and crossed the border into California. This marks the first time that wolves have been confirmed in the state since 1924. Wild wolves have been dispersing from Idaho into Oregon and Washington and are confirmed in the Cascade range. At this time, the U.S. Fish and Wildlife Service has no plans to recover wolves in California but this highly migratory species could establish itself in the state on its own in the near future.



California here I come? A wild wolf (*Canis lupus*) is living in California for the first time since 1924.

The California Department of Fish and Game put up a map on its website to track the wolf's path since leaving Oregon and entering Northern California. As this issue of AKF went to press, the most recent point on the map had OR-7 about 35 miles south of Alturas, CA. At one point the wolf seemed to be heading toward the Nevada state line but has since backtracked and now appears to be spending its time in Lassen National Forest, CA.

The reappearance of an iconic predator to a highly populated state like California offers zoo professionals an excellent opportunity to educate the public. When a zoo visitor asks you about the topic, what will your answer be?

Sources:

californiawolfcenter.org/learn/wolves-in-california/

abcnews.go.com/US/wireStory/california-puts-map-oregon-wolfs-travels-15358192

In Remembrance

AAZK, Inc. sends our condolences to the family and friends of Dianna Frisch, a retired Animal Keeper from the Columbus Zoo, and dedicated member of AAZK. Dianna received the Certificate of Recognition from our Association in 1998 for her service as Chair of the Enrichment Committee and for serving as an author of the Enrichment Notebook. She also received the 1997 Certificate of Excellence in Journalism for her article "Creation of an Age-Diversified Gorilla Group through Alternative Means". She will be remembered for her contributions to professional animal care and to the success of our Association.



Dianna J. Frisch, 62, of Upper Arlington, Ohio, passed away the morning of January 9, 2012 at Kobacker House in Columbus, Ohio. She bravely battled ovarian cancer for seven years. Dianna was born in Norwalk, Ohio on July 15, 1949. She graduated from St. Paul High School in Norwalk and completed her business degree at The Ohio State University, Columbus, Ohio. Dianna was interested in animals from a very young age and always asked her parents to purchase a monkey for her. She received a small stuffed monkey named "Sydney" and had to make do. That would change when Dianna began her career at the Columbus Zoo and Aquarium in 1971. It was her dream job, working in the Children's Zoo in the beginning, then working with Jack Hanna with "Bud", the African forest elephant and finally her great love, the western lowland gorillas. Dianna was devoted to workers' rights and during the early part of her career she was instrumental in establishing the AFSCME chapter at the zoo. She was voted President of the Union and held that position for many years and was known as "Norma Rae". As her career progressed, she became a



widely respected expert in the care and husbandry of gorillas in the captive environment and was promoted to Head Keeper – Great Apes. During her tenure at the Zoo, she was responsible for the re-design of the gorilla habitat and saw the birth of the twin gorillas. Having met and spent time with Dian Fossey, the noted primatologist, Dianna developed the new zoo gorilla program with emphasis on gorillas living in family groups and this led to the first mother-reared baby gorilla

in captivity. Dianna was instrumental in bringing gorilla keepers from around the world together in Columbus for the first Gorilla Workshop. She also gathered information from zoos globally in order to publish the first animal enrichment manual for captive animals in the zoo environment. Later in her career, her focus turned toward the development of the bonobo breeding program which produced the first twin bonobos born in captivity. Dianna was published in the *Who's Who of World Zoos*, among others and appeared in several National Geographic Explorer specials, including "The Urban Gorilla", an Allison Argo film. Dianna retired from the Zoo in 1996. After her retirement Dianna continued to give back to the community by volunteering with Life Care Alliance Meals on Wheels program. She was an inspiration to her co-workers and the many volunteers and Docents at the Zoo. Her love for animals was extraordinary and she dedicated her life to making the world a better place for all species, human and animal. Dianna is preceded in death by her father, John R. Frisch of Leesburg, Florida. She is survived by her partner of twenty years, Cynda Simmons of Upper Arlington, Ohio; her mother, Ethel G. Vogus Frisch of Columbus, Ohio; one brother, John Allen Frisch (Mickey) of Norwalk, Ohio; one sister, Sharri A. Osburn of Columbus, Ohio; two nieces, Aimee Frisch Baer (Stan) of Millsbury, Ohio and Wendy Frisch (Chris) of Norwalk, Ohio; one nephew, Ray A. Osburn (Kaycie) of Columbus, Ohio; one great nephew, Elias Johnathan Osburn. A memorial service was held at the Columbus Zoo and Aquarium on January 21, 2012. In lieu of flowers, donations should be made to the Lukuru Wildlife Foundation, Inc., a project near and dear to Dianna's heart. For additional information regarding how to contribute to the Lukuru Wildlife Foundation, c/o Balestra, Harr, and Scherer, CPAs, Inc., P.O. Box 875, 129 Pinckney Street, Circleville, OH 43113. All contributions are tax deductible.

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